» ROAD TEST: V36 SEDAN + OIL MYTHS BUSTED + INSIDE LINK EMS

PERFORMANCE imports

No. 131

DRAG RACING @ SENDAI JAPAN

KILLER wasp

1072AWHP MERCURY R34!

+

800HP PIT ROAD M GTO

450HP R33 SLEEPER

300HP D-SURF SR R32

100% STREET DRIVEN!

TECH
MIST COOLING
DIY
BRAKE BLEEDING

grip or glide?

SUSPENSION SET-UPS DETAILED

» 520HP RE-WING RX-7

07
82330 01319 5

No. 131
A$9.95 (inc. GST)
NZ$9.95 (inc. GST)
US$9.95 / CAN$9.95

TRIPLE NINE AUTO GROUP

TRIPLE NINE AUTOMOTIVE

NEWLY OPEN

Bosch Car Service
1/41 Boyland Avenue
Coopers Plains

☎ 07 3277 9223

TRIPLE NINE RACING DEVELOPMENT

BRISBANE

- Diagnostics
- Turbochargers
- Engine Conversions
- Suspension Upgrade
- Custom Fabrications
- 4WD Dyno Tuning
- ECU Upgrade
- Wheel Alignment

3/806 Beaudesert Road
Coopers Plains QLD 4108

☎ 07 3272 9992

TRIPLE NINE AUTOSHOP

SYDNEY

19/4A Bachell Avenue
Lidcombe NSW 2141

☎ 02 9643 5571

www.999automotive.com.au

Triple Nine Automotive is a division of KLS Power Group

LATEST RELEASE

PROGRESSIVE EQUIPMENT® CUSCO

Sport Oil Filter

Zero-3X Coilover

Oil/Air Separator Catch Can (small)

POWER 3series SPIRIT K.L.S. · 0-400 SPECIAL DRAG AND STREET FIGHTER TOP FUEL · 1000 · Buddy club MOTOR SPORTS EQUIPMENT · skunk2 RACING · SPRINT BOOSTER · Project μ · DYNO DYNAMICS · Haltech ENGINE MANAGEMENT SYSTEMS · KSPORT · MOTUL · TURBOSMART PERFORMANCE PRODUCTS · WHITELINE Flat out · EXEDY RACING CLUTCH · GReddy · DAVIES, CRAIG INNOVATION · QUALITY · RANGE · ROYAL PURPLE · Garrett® · dba DISC BRAKES AUSTRALIA · TOMEI · 5ZIGEN · TEIN

HPI131_03

www.ksport.com.au

K SPORT

www.ksport.com.au

STREET

DRIFT

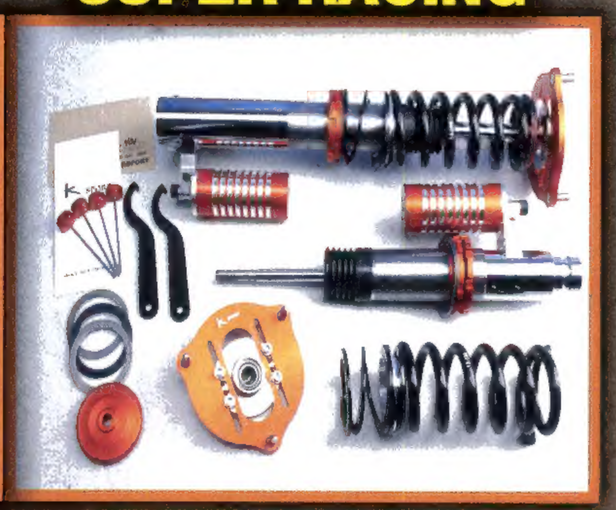
RALLY

CUSTOM MAKE

0-400 DRAG

RALLY GRAVEL

SUPER RACING



KSPORT

NEW SUPER 8 POT

(286mm 304mm 330mm 356mm 380mm 400mm)

SPECIAL PACKAGE SALE

Expires 30/01/2011

OPTION 1

$3500 – K Sport big brake kit

- Front brake 330mm with 8P caliper
- Rear brake 330mm with 4P or 6P calliper

OPTION 2

$3800 – K Sport big brake kit

- Front brake 356mm with 8P caliper
- Rear brake 330mm with 4P or 6P caliper

OPTION 3

$4100 – K Sport big brake kit

- Front brake 356mm with 8P caliper
- Rear brake 356mm with 4P or 6P calliper

OPTION 4

Take any option above to purchase K Sport coilover $1500

DISTRIBUTOR DETAILS:

A & B Motorsports – 02 9905 9523
Wilkinson Suspension – 08 9370 2646 (W.A)
Brakepro Bathurst – 02 6331 1466
Heasman Steering – 02 9557 3739
Trojan Motorsport – 02 6242 6277 (ACT)
Tweakit Performance – 02 9999 3738
Performance Spares - 0407 439 842

KSPORT KSPORT KSPORT KSPORT KSPORT KSPORT KSPORT

HPM129_08

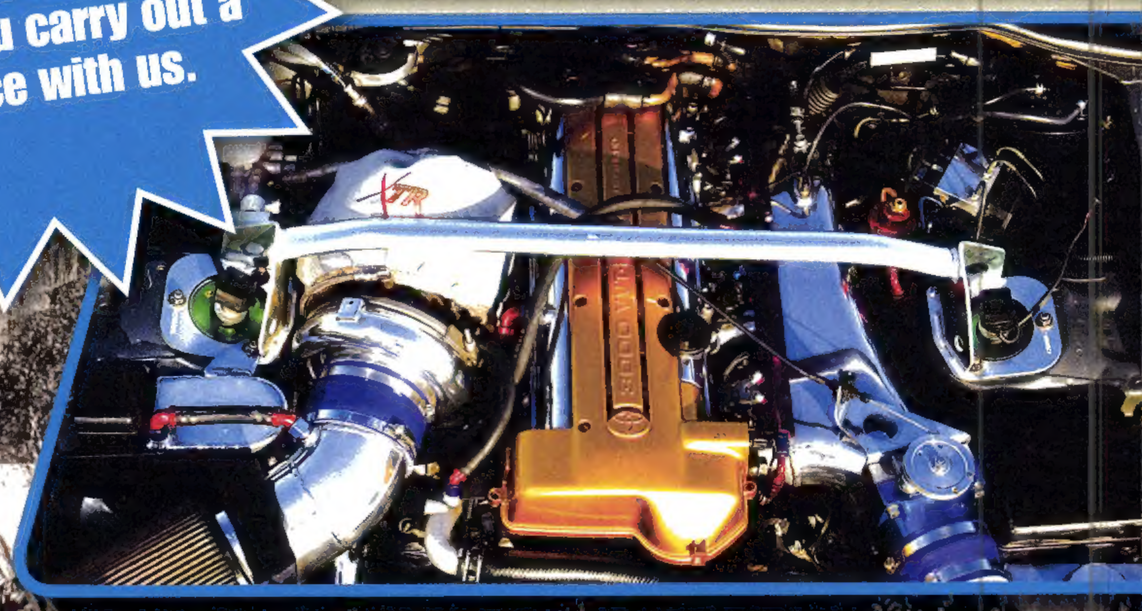
ESP Racing

Extreme Street Performance

HVDFLU 564kw @ 4 wheels

- ENGINE BUILDING
- ENGINE UPGRADE PACKAGES
- TURBO UPGRADES
- INSTALLATION & TUNING ON ALL MAJOR AFTER MARKET ECU's
- EXHAUST SYSTEMS
- DYNO FACILITIES 2WD & 4WD DYNO DYNAMICS
- FORD EDIT
- HOLDEN LS1 & LS2 EDIT
- NEW CAR LOG BOOK SERVICING
- GENERAL SERVICING & FULL MECHANICAL WORKSHOP
- WE BUILD ANYTHING FROM YOUR DAILY RUN AROUND TO FULL SHOW CARS WITH RECORD BREAKING PERFORMANCE
- VEHICLE REWIRING
- CUSTOM INTERCOOLERS & PIPING, INLET MANIFOLDS & EXHAUST MANIFOLDS AVAILABLE

PAY ONLY $50
for a dyno evaluation when you carry out a service with us.



SDISTC 623kw @ 31psi

BST003_14

171 GILMORE ROAD, QUEANBEYAN • PH: (02) 6299 4444

WWW.ESPRACING.COM.AU • EMAIL: QUOTES@ESPRACING.COM.AU

TURBOSMART PERFORMANCE PRODUCTS · CLEVITE 77 ENGINE BEARINGS · PLAZMAMAN .com · NOS Nitrous Oxide Systems · MICKEY THOMPSON · ATI PERFORMANCE PRODUCTS · Garrett Turbochargers · Auto Meter · ARP automotive products · ViPEC · Brian Crower

SVI

Special Vehicle Imports

406 Nicklin Way, Bokarina Sunshine Coast QLD

Ph: 07 5493 8233 | **Email:** info@svi.com.au

"Seriously, you can't buy better than this"

- Licensed motor dealer/broker (safeguards you)
- Genuine money back guarantee
- Genuine certified klms
- Comprehensive Japanese inspections
- 30 – 40 pics per inspection prior to bids
- Japanese inspector with Aussie experience
- Prompt transport and shipping
- Paperwork completed on time for clients
- Best compliers (not cheap and nasty)
- Reputable, regular shippers
- Onboard shipping insurance
- Use of our license to clear customs (air con gas)
- 6 days a week access for enquiries
- 12 years of great reputation
- Current pricing checked for you
- Parts, service and warranty back up
- Hundreds of happy client referrals
- Personal service and no "scanned calls"
- Japanese auction sheets supplied
- Buy the car you want, you get to choose
- Buy direct and save a serious amount
- Takes 5-7 weeks usually
- Pay as you go, 3 stages
- Discuss all aspects with experienced broker
- The facts about modified vehicles
- If we cant help you we can recommend good dealers
- We actually comply vehicles
- We genuinely want you to get the car you want
- We know we can save you money
- Have finances in place first please

S15 SILVIA Turbo & Non Turbo available from **$16,000**

V35 SKYLINE COUPES & SEDANS now from **$17,800**

R33/34 Turbo & Non Turbo coupes & sedans from **$10,000**

EVO 5,6,7&8 available from **$15,000**

Delica 4x4 People mover's Diesel & Petrol, 7 & 8 seat Series 1 & 2 available from **$10,000**

Elgrand 2 & 4 wheel drive's E50 & E51 available from **$12,000**

V36 COUPES available, as new low klms only. POA latest models now available in auction. Full inspections done prior to bidding time.

CALL OR EMAIL TO FIND OUT ABOUT BUYING DIRECT

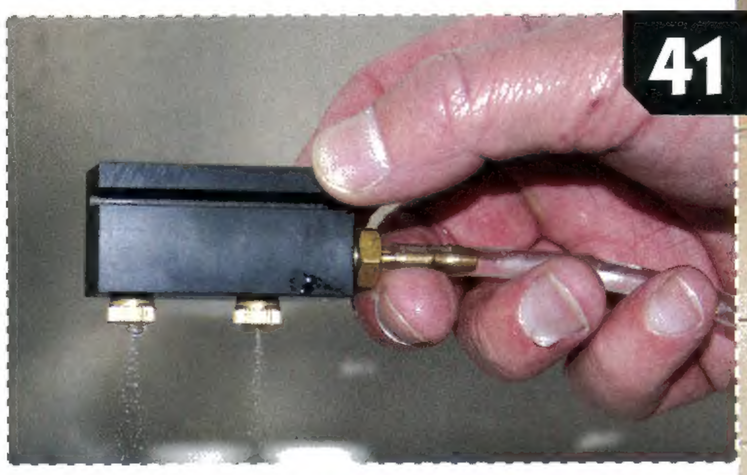
Ph: 07 5493 8233 | **Email:** info@svi.com.au

www.svi.com.au

PERFORMANCE imports

ISSUE 131

WWW.HPI.COM.AU

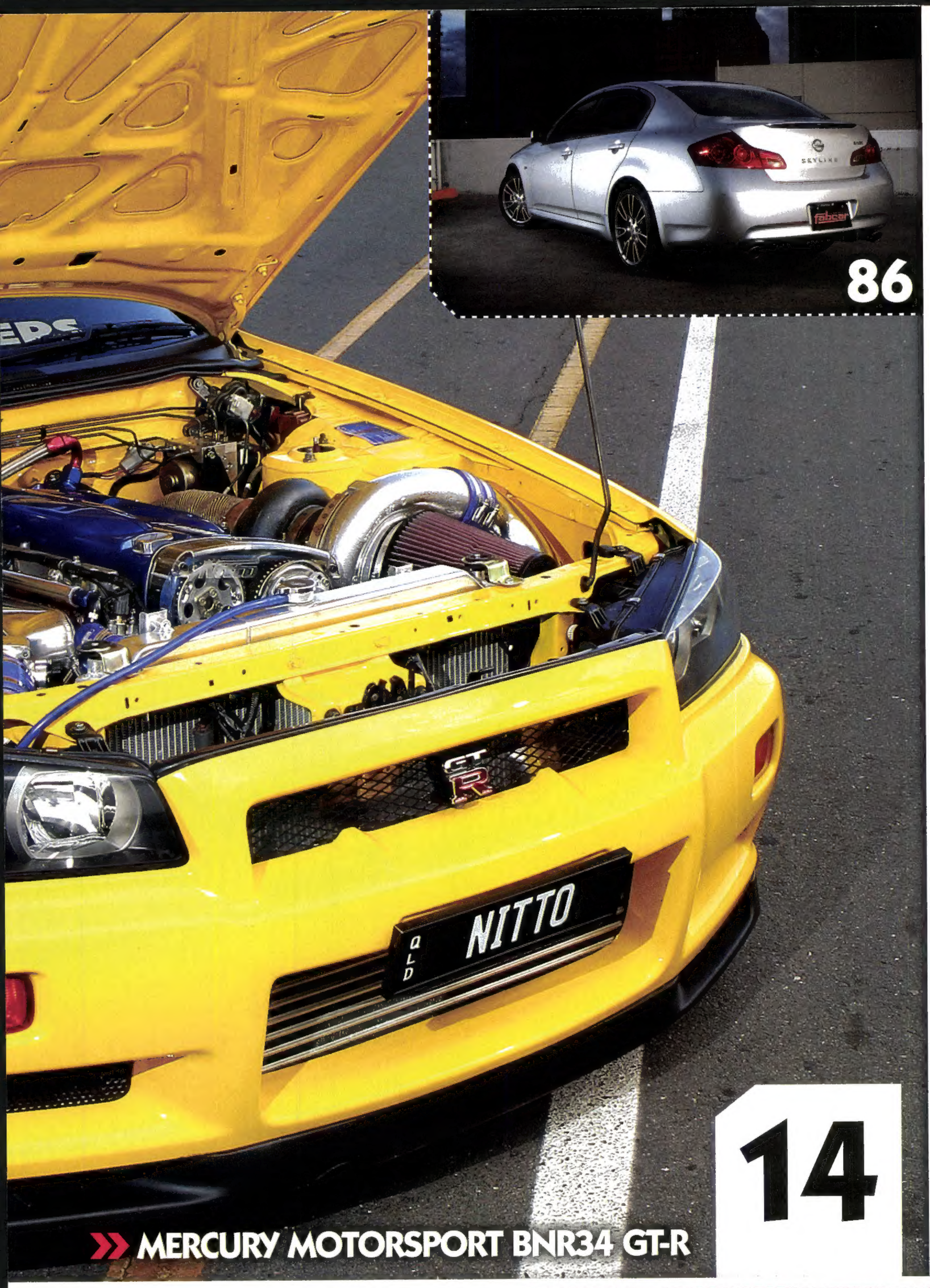


TECH FEATURES

41 MIST COOLING
Don't know what it is? You should...

75 OIL SPILL
Oil myths dusted for once and for all

99 LET 'EM BLEED
How to bleed your brakes without incident



Contents

SPECIAL FEATURES

28 RETURN TO SENDAI
Drag is back in J, and we have the coverage to prove it

62 GRIP OR GLIDE
Set up your ride for any handling situation

80 GASBAGGIN'
NSW's power superstars return for the GAS Motorsport Supra dyno day

92 LINKED IN
Inside ECU manufacturer Link EMS NZ

DEPARTMENTS

8 IMPROBITY
Inside the manic mind of the editor

10 IMPENDING
News, toys and tid-bits

58 POSTER

103 PIMPORTATION
This month's tirade from Jeff Ash

105 IMPRIMATUR
Iron Chef Kristian Appelt speaks

106 IMPUGNATION
Ask and you shall receive... answers

113 PI DRAG CHALLENGE
The ultimate drag table

114 NEXT MONTH
What's coming next issue

FEATURE CARS

14 SUPERPOWER
Almost 800awkW from a 2.7L RB26 says it all

22 KILLER BIRD
One super-hi-po 1971 Datsun 510 Bluebird 1400 Deluxe direct from J

34 WINGMAN
The 520hp RE-Wing RX-7 takes flight

46 STEALTH FREAK
An R33 GTS-t sleeper with a 455rwhp GT-R heart and body

52 PIT FIGHTER
Pit Road M pulls no punches with its monster GTO

68 SURF'S UP
From D-Surf Japan to Surfers Paradise Australia, this SR R32's a jet-settin' slider

86 SIX SHOOTER
Nissan's V36 sedan brings suave to the Skyline name

Improbity

Ethical Ethanol

If things must be taken with a grain of salt, you almost need a teaspoon of the stuff when looking into some areas of the import aftermarket. One area in particular where there is an awful lot of confusion, floaty numbers and chest-beating going around is the impending introduction of E85 into the consumer mainstream.

Caltex has announced E85 (Bio E-Flex) is about to go national at 20c less than unleaded, with 10 stockists listed in Sydney alone. They do, however, state that "Different seasons can change the way fuel performs in your engine, so Caltex will adjust the blend of ethanol from 70 to 85 percent between seasons to ensure your engine performs correctly".

Consistency is paramount, so that's a little worrying, as is the actual source of the ethanol in question. What you want is E85 made completely from the byproducts of sugar-cane refinement and not from grain or corn, which in any other case could be used as a food source for those in poor, impoverished nations. It's fuel from waste versus fuel from food.

In my opinion, oil and petrol companies are right up there with the worst in the corruption and bullsh*t stakes, and thus the salt spooning reference at the start of this editorial. Add in massive overuse of the terms 'bio', 'enviro', 'eco' and so on, and it's easy to see how consumers may be being led down the propaganda path.

Of course, most readers will not be concerned with such things given the near magical properties of this fuel. We've had quite a number of tech stories now on preparing your car for E85. Most prominent tuners in Sydney are well-versed in its usage these days, but in very lay terms consider at the bare minimum you'll need to double your fuelling system and have your vehicle tuned to suit. The net is swarming with info as well. A quick search brought up a forum thread well over 120 pages long (if the 114 pages in PI aren't enough for you).

I guess for once we can thank the Holden Commodore for doing something, namely leading the push for more E85 outlets since the introduction of Series II. The V8 Supercars have also swapped up, further fuelling the thirst for E85.

As always, we here at PI are up for supporting local product. So, provided the price is right, the source ethical and consistency correct, it could be a good thing for all import lovers (provided extra taxing does not do a future stacks-on). After all, you won't be seeing crude oil come from Australia any time soon. We have LPG a-plenty sure, but when's the last time you saw a Skyline getting by on barbie fuel?

Fingers crossed it pans out and we can all be living 30kW the merrier in the coming years.

Stay tuned,

PROVIDED THE PRICE IS RIGHT, THE SOURCE ETHICAL AND CONSISTENCY CORRECT, IT COULD BE A GOOD THING FOR ALL IMPORT LOVERS

Special thanks to contributor Jeremy Blackman who sent over the latest Nismo catalogue. How about Nismo shopping bags, rocker-cover keyring, credit card or a $6183 carbon-fibre GT-R briefcase?

FOREIGNER OF THE MONTH

MITSUBISHI NAKAYA TUNE FTO

Produced in early 1997 prior to the coming facelift, 300 Nakaya Tune FTOs were sent out into the world. The model itself was tuned by Akihiko Nayaka, the Taevion Trampio FTO driver in the GT300 series from 1998 to 1999.

The Nakaya Tune model featured a Prof sports muffler, AP brake pads, Ohlins shock absorbers, all under the Nakaya name, as well as a carbon-fibre lip spoiler and special suspension dropped 35mm over the standard model. A MoMo three-spoke sports steering wheel was including, along with leather shift knob, Sports Mode AT shift indicator for the autos and green window glass.

The model itself was based on the FTO GPX, which meant the revvy 2L V6 MIVEC 24-valve with 200bhp@7500rpm and the best FWD handling this side of an Integra Type R. If you're really keen, you can 'drive' the model in Gran Turismo 4. Also check out http://homepage1.nifty.com/hmoriya/main.html for a look at some of the NT components. (Pic: via www.mitsubishi-fto.org)

PERFORMANCE imports

EDITOR
JASON ROUND
Email: jason@hpi.com.au

CONTRIBUTORS
DINO DALLE CARBONARE, JEFF ASH, DAVE REID, RICK MCDOWELL, JOHN JOVIC, JUN SAWA, JEREMY BLACKMAN, SCOTT PADDY, GUY BOWDEN, KRISTIAN APPELT

ART & PHOTOS
CREATIVE DIRECTOR - MOTORING & LEISURE IGOR AMEDOV
ART DIRECTOR RYAN WEEKS
DESIGNER ADRIAN TIPPER
STAFF PHOTOGRAPHER ERIC TANG
PRODUCTION EDITOR - MOTORING & LEISURE JOHN HAMILTON
PRODUCTION MANAGER BRONWYN MCNEIL
ASSISTANT PRODUCTION MANAGER LUCIA ZAVAGLIA

ADVERTISING
SENIOR ADVERTISING MANAGER MATTHEW RICE
Phone: (02) 9741-3848
Fax: (02) 9748-3596
Mob: 0404 672 196
Email: mrice@expresspublications.com

ADVERTISING PRODUCTION COORDINATOR CHRISTINA GEORGA
cgeorga@expresspublications.com.au

SUBSCRIPTIONS
Freecall: 1800 801 647
Fax: (02) 9737 8017
Email: subs@expresspublications.com.au
For back issues please call 1800 801 647

RETAIL SALES & OVERSEAS DISTRIBUTION ENQUIRIES
MARK COLES
Email: mcoles@expresspublications.com

NORTH AMERICAN DISTRIBUTOR
STONEHOUSE PUBLICATIONS
Toll Free: 1800 461 1640 Fax: 905 428 7554
kevin@transmedia-group.com

SINGAPORE DISTRIBUTOR PANSING PTE LTD
Phone: +65 6457 7678
Email: infomags@pansing.com

GROUP PUBLISHER GLENN WRIGHT

GENERAL MANAGER - MOTORING IGOR AMEDOV

PUBLISHED BY EMG, a division of
Express Publications Pty Ltd
ACN 057 8087 904
Under Licence from EP Investments Pty Ltd
ACN 003 109 055 All Rights Reserved
2 Stanley St. Silverwater NSW 2128
Phone (02) 9741 3800 Fax (02) 9748 1956

PRINTED BY TIMES PRINTERS SINGAPORE

All material in this magazine is protected by copyright laws and may not be reproduced in part or full without the written permission of the publisher. Prices and dates quoted in this issue were correct at the time of going to press but might be subject to variation. In respect to technical information provided for any vehicle modifications or driving maneuvers referred to in the articles published in this magazine, the Publisher expressly disclaims any belief in the truth or falsity of the technical information or driving maneuvers provided and is merely passing on the technical information or driving maneuvers as a service to readers. No warranty is given as to its accuracy and it should not be substituted for expert advice from a qualified motor mechanic in respect of technical information provided for any vehicle modifications or from a qualified driving instructor in respect of any driving maneuvers referred to in this magazine.

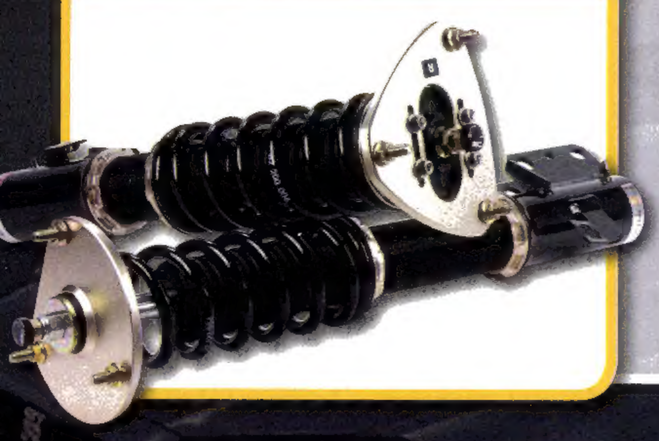
BC

BC SUSPENSION SYSTEMS

V1 SERIES $1199
STREET AND CIRCUIT COILOVER

V1 Design Coilovers are designed to provide a superior combination of value matched with ultimate performance. Featuring 30 levels of Damping Force adjustment with Full-length height adjustment, The V1 Design Coilover meets the needs of drivers who strive for the perfect balance between pure comfort and a smooth forgiving ride quality.

BR SERIES $1299
STREET AND CIRCUIT COILOVER



BR series Coilovers use a large 44mm diameter piston in a 53mm diameter damper body to maximise oil capacity. As the damper unit operates, the oil contained within heats up. The viscosity of oil changes as its temperature varies which can lead to changes in the damping characteristics of the unit. The increased oil capacity of the BR Series reduces peak temperature which in turn significantly improves damper performance.

RM SERIES $1399
INVERTED DAMPER FOR PRO TRACK

BC Racing RM series offers the majority of the features of the BR series along with high quality damping adjustable monotube inverted dampers at the front or front and rear (vehicle dependant). Unsprung weight is reduced by moving the oil and gas reservoir way from the hub and attaching it to the shell, to provide superior grip and road response.

ER SERIES $1699
EXTERNAL RESERVOIR

BC Racings premium flagship Coilovers complete with external reservoir for separate compression & rebound damping adjustment. Additional oil capacity reduces peak oil temperatures thereby decreasing damping rate variations due to oil viscosity changes. The ultimate in road and track performance suspension.

FOR ROAD, RALLY, RACE & DRIFT

- **Every BC damper is dyno tested in house**
- **Maximum stability, handling & performance**
- **30 way adjustable damping**
- **12 months warranty**

All PRICES INCLUDE GST & DELIVERY

EXTREME TRACTION & RESPONSE

Available from:

www.JustJap.com

AUSTRALIAN AUTHORIZED DISTRIBUTOR

101 Bath Road, Kirrawee Sydney, NSW Australia 2232

P: (02) 9545 0532 • F: (02) 9542-1684

www.bcracing.com.au

TF4D_13_AB

Impending

Forward answers to jason@hpi.com.au

GUESS THE PART

Last month: Tabata R2 radiator

FOURSOME RODS

We love Tomei Powered press releases, including the latest for the company's new 4AG H-beam connecting rods.

Big power leads to larger stressing matters when the compression forces that the pistons receive get higher. The conrod then plays a vital role to keep it all connected with the crankshaft. So, in effect, the conrod should become one with the piston to help drive the crankshaft with a smooth fluid motion.

Says Tomei, "Reliability at high engine speeds plays a key factor when the balance of inertial gravity comes into play. The weights of the connecting rods are also important when engine response is looked at during the engine's characteristics for the build. Our connecting rods are designed with the key targets of balance, weight reduction, strength and reliability in mind."

Check out the specs:

After strong demands, the rods are now in stock, with an RRP of $680 USD ($705 AUD), part number 125007. For more info, head to www.tomei-p.co.jp for a list of local distributors.

SPECIFICATIONS:

CONNECTING ROD
CENTERLINE (mm): 122
LARGE END DIA x THICKNESS (mm): 45 x 21.85
SMALL END DIA x THICKNESS (mm): 20 x 21.85
MATERIAL: SNCM439

CONNECTING ROD BOLTS
THREAD: 3/8-24
BOLT LENGTH (mm): 40

CONROD BEARINGS (not included)
INNER DIA. (mm): 42
BEARING WIDTH (mm): 17.2

PRECISION ENGINEERING

Powertune is pleased to announce that it has become the Australian stockist of Precision Turbochargers. "Their range of billet turbochargers have been proven on the tracks of the USA and now it's our turn!" says the team. "At this early stage, we are stocking the mid frames such as the Billet 5557, 6262, 6265, 6765 and larger GT42-style 7175.

Speaking of which, the Precision 7175 (AKA GT4271R) is a dual ceramic ball-bearing turbo with billet 71mm comp wheel, 75mm turbine wheel and a 985hp rating. Available in both divided and open turbine housings, it's used on the Powertune R34 GT-R and is one very serious turbo.

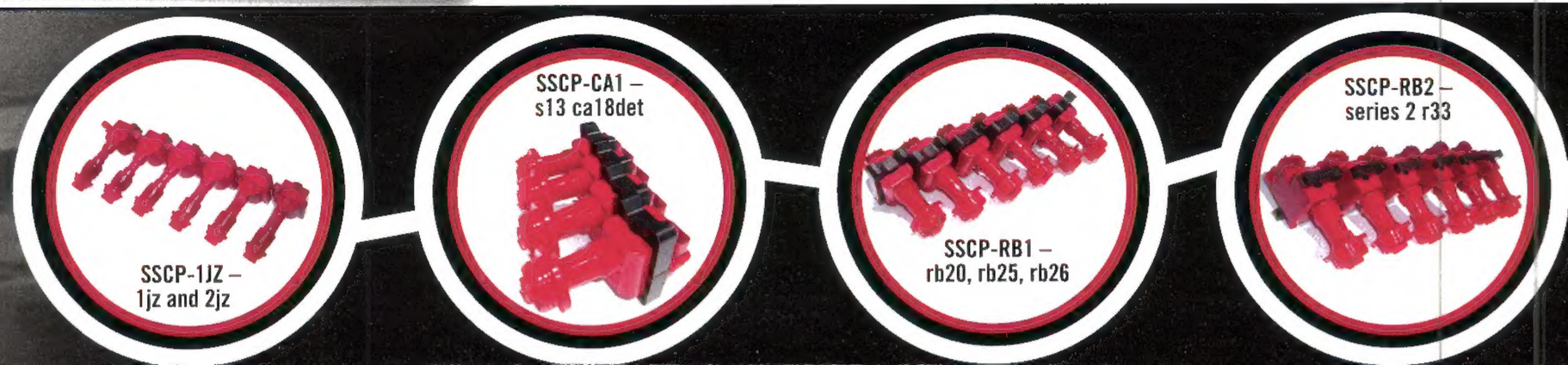
The Precision 6262SP has a 680hp rating, is available in journal and dual ceramic ball-bearing, and in T3 or T4 flange V-band. With its 4in intake ported compressor cover, it's comparable in size to a Garrett GT35, with more punch. It's currently used by the AWD Motorsports EVO in the USA, which went 8.98@156mph with a T3 rear, E85 and no nitrous! Says Powertune, "We have these in stock, priced $1345 non ball-bearing, $1845 ball-bearing V-band. V-band kits for $77, oil drains for $50.

Powertune also has CP pistons running out for $693 with SR20, 4G63, EJ25 various compression and .5mm, 1mm oversize, or 2JZGTE at $990.

Check out the Powertune website for all the info via www.powertune.com.au or call (02) 9724 0606.

- MORE POWER
- DIRECT REPLACEMENT
- IMPROVED COMBUSTION
- STRONGER SPARK

www.SuperSpark.com.au
OR CALL JAMIE ON 0427 049 087



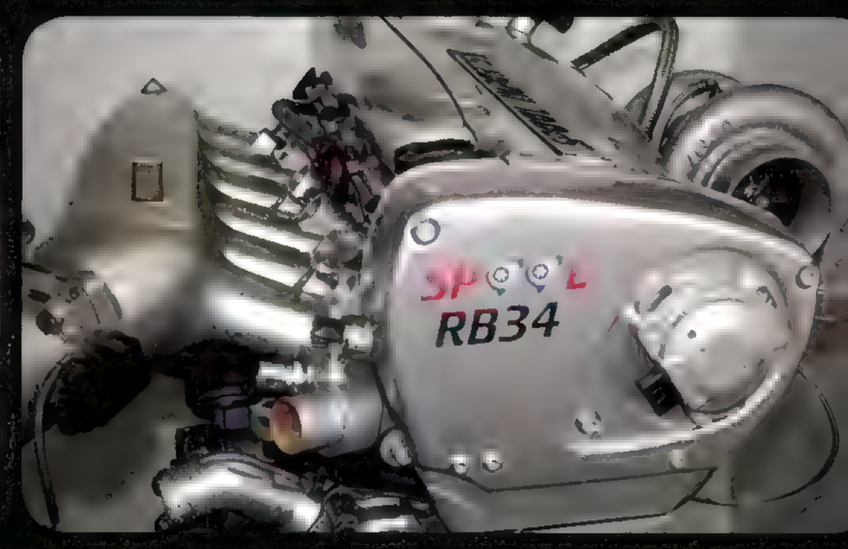
PLATINUM CLUB

Platinum is releasing its next generation of camshafts this month. After years of R&D, including countless hours at the dragway, circuit and on the dyno, Platinum has designed a grind of camshaft that have been proven to work.

Say the boys, "All the main Japanese brands were graphed, tested, studied and have all been found to have slight downfalls, whether it be over-extended lobe ramping, too much lift or not enough duration. Platinum cams were bred out of pure necessity for the best street and race cam. You could never ask the Japanese to change a cam characteristic, so we developed our own."

Platinum race cams use a variety of quality blanks from all over the globe and are ground by masters of cam technology in the USA. "Forget the name-brand Japanese product that was the cutting edge in cam technology years ago. Let's face it, where are they now? The world's fastest cars are coming out of Australia and USA. Maybe they should be taking tips from us...?"

All the info is available at Envy Dyno via www.envyimports.com.au.



SPOOL PARTY

Brad Goucher at Spool Imports has been a very busy bee, now stocking Spool CA18 and SR20 stroker cranks, with items for the RB26, '25 and RB30 to follow soon. Spool RB30 H-beam conrods have also recently seen Turbowerx's very own RB26 S15 rocket to an amazing 1150rwhp.

Also exciting are these spy shots Brad sent through of the RB34 stroker kit currently in development utilising Spool's billet 95mm stroker crank. Yes, that's 3.4L – unheard of until now. The engine's currently using an RB30 block bored 40thou', CP pistons, Spool billet mani caps and girdle, Cometic head gasket, Spool I-beam custom conrods, with an RB25 R34 NEO head ported and polished by JHH Performance. With a Garrett T04Z set to be slotted in, it should push out some serious power.

For more info, scope out the 'How to build an RB34 heading' on the website via http://spoolimports.com.

HEAVYWEIGHT BOXER

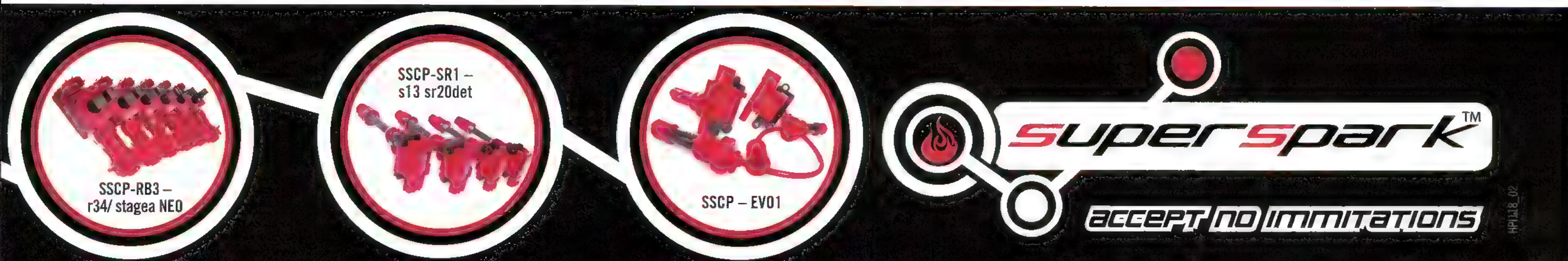
Subaru has shown off its third-gen boxer engine, it's first all-new engine since 1989. Fuji Heavy Industries reports the engine is being produced in both 2.0 and 2.5L capacity for the Japan domestic market.

Showcasing Subaru's latest engineering, the new engine offers environmental and economy refinements. FHI reports some domestic market versions achieve approximately 10 percent fuel efficiency gains. FHI has built a new state-of-the-art factory at its Gunma Oizumi Plant in Japan, exclusively for production of the new engine.

The new powerplant further refines the advantages of horizontally opposed engines: light weight, compact size, low centre of gravity and low vibration. Japan domestic market versions also offer improved torque over the superseded engine.

Among the major changes are a longer stroke, compact combustion chamber, lighter moving parts, cooled exhaust gas recirculation system, intake/exhaust Active Valve Control System, Tumble Generator Valve and compact oil pump. Power is 109kW, with torque at 196Nm for the 2L.

How's this killer shot by Just Dave at last year's Mercury Dyno day? In fact, this is one of a couple of R35s Mercury has been developing to over 600rwhp of late



MEET THUNDER WIZARD AND CHRIS

T·WIZZ

JUST·CAR INSURANCE

IF IT'S NOT JUST A CAR

To insure your ride, call 13 13 26 or visit justcarinsurance.com.au today.

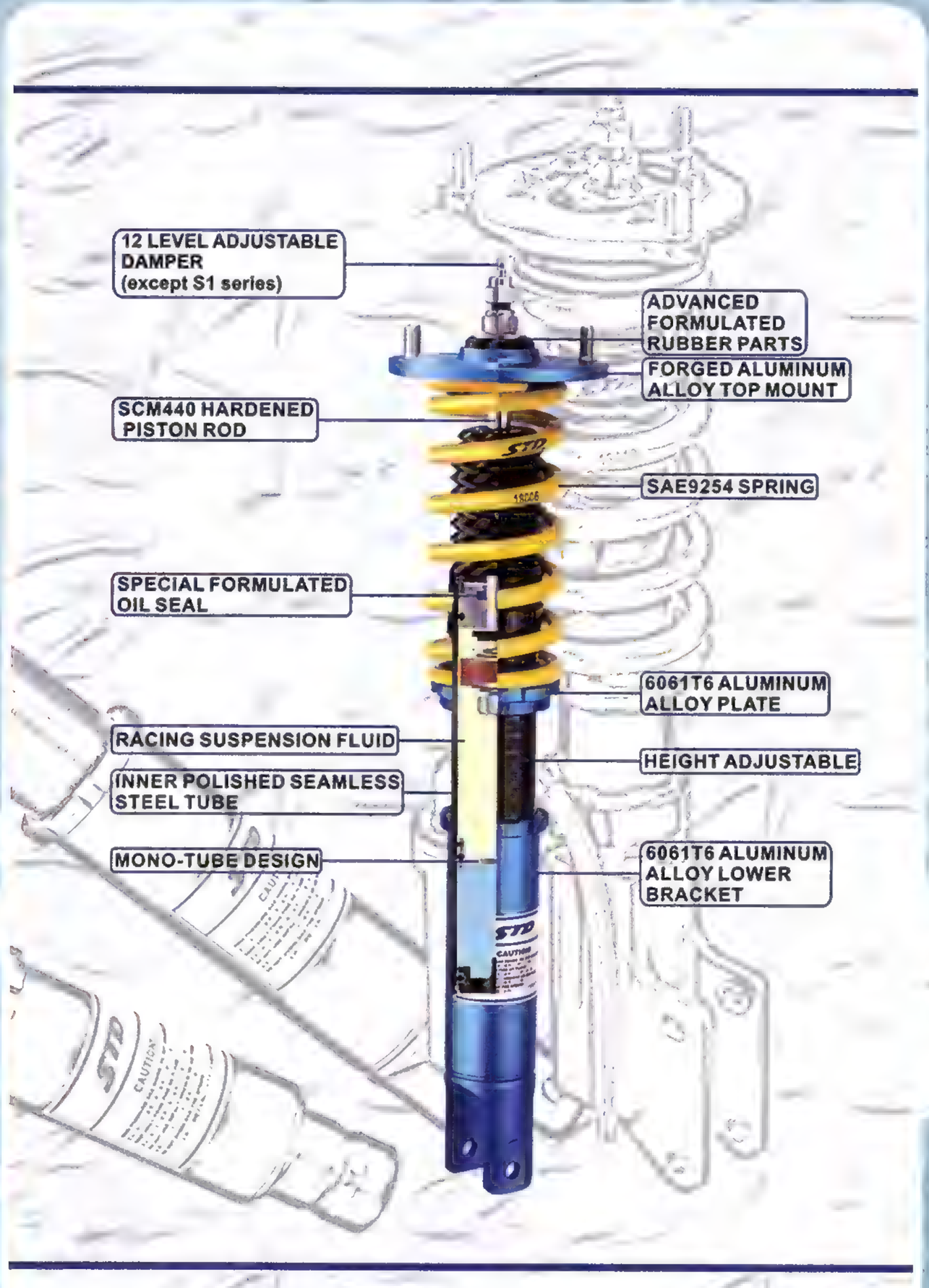
Just Car Insurance Agency Pty Ltd (ABN 41 050 238 563) is an authorised representative of Australian Associated Motor Insurers Ltd.

STD STANDARD

ALL NEW STD Standard Suspension in Australia

Used by
JAPANESE DRIFT KING
Keiichi Tsuchiya

State distributors and dealer enquiries welcome



HP1127_04

Available for most makes and models

Stockists for: CUSCO RED LINE SYNTHETIC OIL

www.evolution-r.com.au

U3/No.9, Capel Court, Bentley, WA 6102
Tel: (08) 9358 0288 Fax: (08) 9313 3295 Mob: 0421 387 888

POWER

Australia's horsepower numero uno, prepare to be blown away by Mercury Motorsport's king 'B 799awkW R34

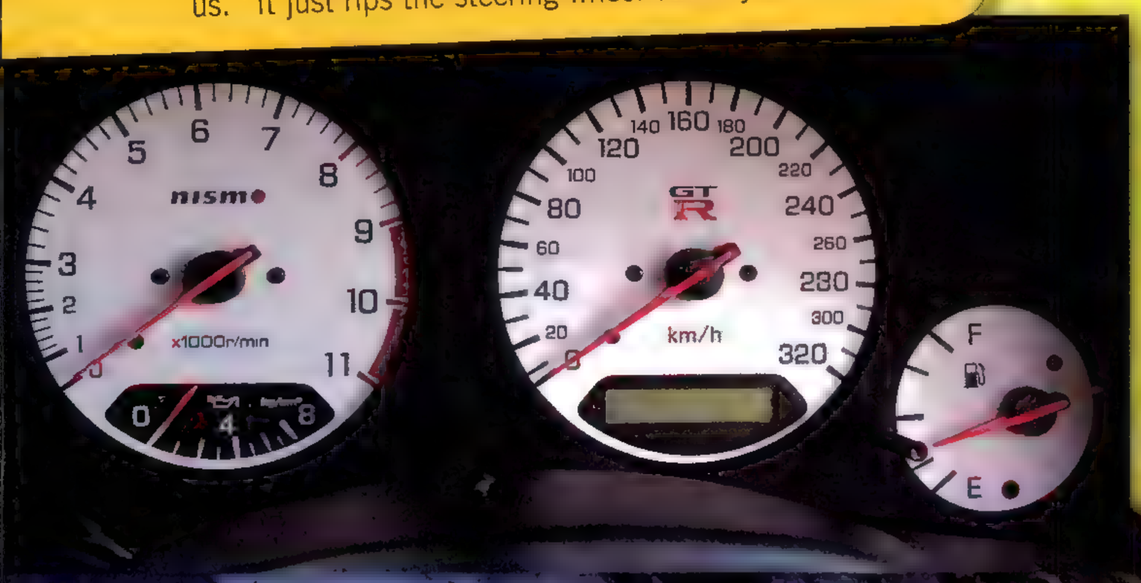
Words: Jason Round Pics: Dave Reid

THE AIM NOW IS TO MAKE 1000KW AT ALL FOUR

FORMER LIFE

Prior to the full Nitto build, some of you may recall the R34 getting around with the plates 'SLOWAZ'. Back then it was running with a Japanese 2.8L kit with '45R and a peak figure of 938whp – right at the limit of the set-up. This, however, was never meant to be an all-out build, which is why it was pulled out to make room for the Nitto stroker.

Tess drove the car some 200km during a cruise back in its 2.8L era and admits even then the car was simply too scary. "I only drove it with a third throttle," she told us. "It just rips the steering wheel out of your hands."



Nitto products are 'by racers for racers', so detail is paramount. Take the crank, made from 4340 billet steel that's quenched, heat-treated, fully counterweighted, nitrided and balanced before being triple-checked for quality

If there were ever an Olympics for autos, with a 'highest amount of GT-R horsepower per capita' event, I have no doubt Australia would come out on top, even over superpowers like the US. To narrow it down even further, you'd have to say Queensland is the horsepower state, and none are more powerful than Mercury Motorsport's very own 'killer wasp', the NITTO R34.

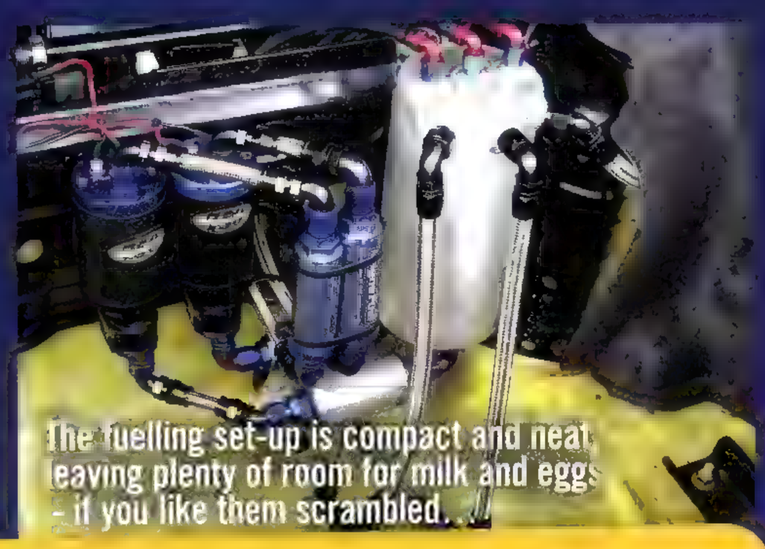
The 2000-model Lightning Yellow GT-R has put out a best of 799awkW, or 1072awhp, amongst quite a few over 1000hp runs of late. That's insanity from a 2.7L. There's no RB30 bottom hiding in the engine bay either, nor Japanese stroker kit in place. It's all true-blue Aussie engineering at its finest.

Readers with their head screwed to their shoulders should be very familiar with 32-year-olds, and newly-weds, Trent and Tessa Whyte of QLD's Mercury Motorsport. You only have to read through their previous rides to realise they're both quite serious about cars that live by the anti-rubber manifesto.

Trent's owned a TE Gemini, 10sec blue S15, 11sec yellow S15, 10sec S13, 10sec Drift Australia R32 675rwhp four-door, R32 GT-R with minor mods, Holden Frontera tow car, another R32 GTS-t and a 280awkW Evo X. Tess's also something of a 'collector', herself owning a 13B mild-port RX-2 sedan, Laser TX3 4WD turbo, 13BT RX-7 Series II, Barina daily, as well as two R32 GTS-ts, including the 540rwhp example we featured in issue 129.

The funny thing is, Tess's own R32's still only putting out half the horsepower of NITTO. As a passenger you're literally riding shotgun, sitting in the hot seat and waiting for 41psi to blast through the chamber. It's pretty much a giant bullet with two Brides strapped to it.

Says Trent of driving, ah, taming the R34, "It's like nothing, nothing and then..." he laughs, noting the engine has not been designed for outright response. That's why a nitrous kit is in place soon to be connected. Still, for a 2.7 with a big turbo, full boost comes it at a decent 6800rpm, Trent taking it out to 9500rpm. For Sydney Autosalon, the team will dig up the appropriate (and expensive) fuel, which should see them push even further to 10,500rpm.



The fuelling set-up is compact and neat leaving plenty of room for milk and eggs - if you like them scrambled...

SICK ROTAS

Another recent addition to the R34 are these ROTA P-45R (AKA 'GTR') 19x10in +20 wheels in gunmetal. In fact, ROTA Australia's come onto the build in a big way, providing no less than three sets of its wheels for the project.

The great thing about ROTA is that its wheels feature classic designs at a considerably cheaper price than the competition while still remaining lightweight and uncompromised in terms of quality.

If you like the look, get your own set by contacting ROTA Australia via www.ROTAAustralia.com.au or on (07) 544 4 4784.

Continues Trent of the driving experience, "When it's on, it's on. It will smoke all four in third or fourth."

In fact, our very own Iron Chef, Kristian Appelt, managed to find himself in the passenger's seat at Powercruise, and he came away suitably impressed. He was filming video at the time, but somehow whenever boost comes on the only footage you see is of the roof-lining... "Nuts" was his final verdict.

Even Tess admits just being a passenger in the car makes you ill. She often finds herself bracing her body any which way she can, feet fully pressed against the dash, against the onslaught of torque. It is that violent.

What's amazing then is that the standard six-speed and two-plate ORC clutch, rated to only 800hp, is holding up. That's largely because Trent doesn't see the need to barrel away with gear-munching launches, instead rolling on and letting the power do its work.

So, why the GT-R in the first place then? Trent and Tess told us, "We chose the R34 because of its good looks and performance from factory. It's easy to get big power out of an RB engine. Even though R34 GT-Rs are now 10 years old, they are still big head-turners in factory form. It's always been a dream of both of ours to have an insane R34 GT-R."

By 'insane', they mean a goal of building a 1000whp dyno/show car that could also driven at events like Powercruise. Mission accomplished.

As you can no doubt realise then, a lot of the internal specifications are very hush-hush, but the benefits of the Nitto stroker kit itself are well publicised.

It's made up of an increased stroke crank manufactured from solid 4340 billet steel, with one-piece forged billet I-beam conrods and special JE/Nitto pistons matched to upgraded thick wall gudgeon pins and a premium ring set. All this pushes things out 0.1L to 2.7L, which ultimately means massively increased power potential while retaining the RB26's famous responsiveness and high-RPM character.

Look deeper and you'll realise just the kind of experience that has gone into the engine bay. For example, Paul Diemar was heavily involved with the build's assembly and machining work, a certain name you might know from his 'Twoogle' R32 fame (cover of issue 92). Paul's now set up Red R Racing, meeting together with Mercury, Nitto, Hypertune, Turbosmart and MTQ to develop this monster.

"The engine combination is a result of careful planning between Trent at Mercury, Paul at Red R Racing and Andrew at Nitto Performance Engineering. Every detail, tolerance and component was selected with the aim of making outright horsepower."

Tess and Trent are, however, quick to point out the car's purpose. "This is by no means a 'street car' engine," they note. Though, that's not to say it doesn't get out on occasion, happily blending it with the humdrum everyday citizens who are largely oblivious to the more-power-than-a-Veyron machine idling beside them.

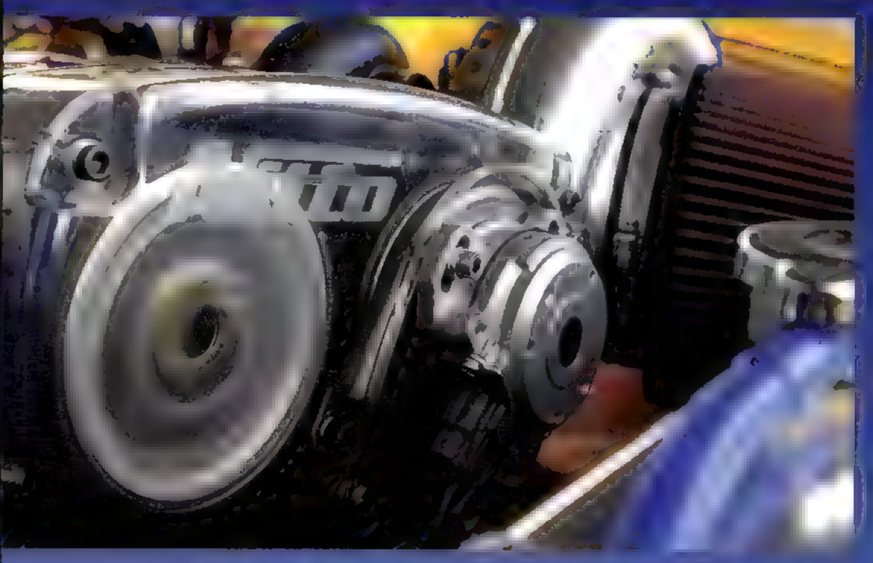
As it stands now, the 5in dump ending under the passenger seat (and trust us, it's a once-in-a-life feeling at the bottom of your pants sitting in the passenger seat) isn't conducive to street duties, which is why the car's mostly to be seen at the dyno and track.

ROLLIN'

Club High Rollers is a prestigious car enthusiasts' car club based in south-east Queensland, with members located Australia-wide. 'CHR' is represented at several shows/events by many high-horsepower street cars such as 'NITTO', Michael and Phoebe's 'DRAGER' (1000rwhp Supra) and Adam and Miranda's 'FATGTR' (750awhp R32 GT-R), to name just a few.

For more information regarding Club High Rollers, visit www.clubhighrollers.com.

Squint closely and you'll see the look of enjoyment on Tess's face there, and that's off-boost...



JBT has been around in the braking industry since 1994, but only started selling to the public as of 2002 after a lengthy R&D process

With their high bolsters, there's no escaping a Bride Brix II, but really, who'd want to when you're sitting in this?

PUSHING A 2.7L ENGINE TO 1000WHP IS NEVER EASY, SO GETTING THE COMBINATION PERFECT HAS BEEN A CHALLENGE

BNR34

So far NITTO's come first overall at the last Powercruise dyno comp and second overall at the Autosalon dyno comp, both without nitrous. A few more scalps will no doubt be stacked up next to the surge tank soon, so keep an eye out.

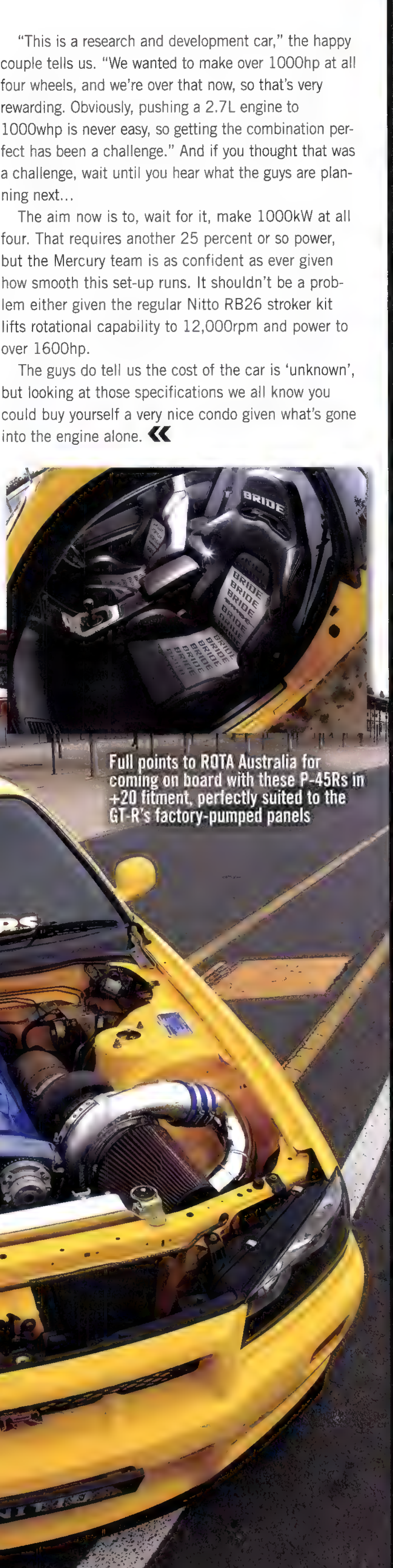
Apart from the engine itself, a number of additions were also fitted just in time for our shoot in order to make NITTO more of a solid, rounded vehicle as opposed to another all-engine runner. This includes the twin Bride Brix IIs inside, new ROTA wheels in aggressive 'GTR' fitment and JBT big-brake kits both front and back, a brand distributed by Mercury. And believe us, putting a stop to 1000whp ain't easy...

Trent and Tess would like to end by saying thanks to the Mercury team (John, Gordon, Skinny, Mick and Luke), Paul Diemar at Red R Racing, Andrew at Nitto Performance Engineering, John at ROTA wheels (07 5444 4784), John Schott, Peter at Hypertune, Marco at MTQ and Troy at Turbosmart.

"This is a research and development car," the happy couple tells us. "We wanted to make over 1000hp at all four wheels, and we're over that now, so that's very rewarding. Obviously, pushing a 2.7L engine to 1000whp is never easy, so getting the combination perfect has been a challenge." And if you thought that was a challenge, wait until you hear what the guys are planning next...

The aim now is to, wait for it, make 1000kW at all four. That requires another 25 percent or so power, but the Mercury team is as confident as ever given how smooth this set-up runs. It shouldn't be a problem either given the regular Nitto RB26 stroker kit lifts rotational capability to 12,000rpm and power to over 1600hp.

The guys do tell us the cost of the car is 'unknown', but looking at those specifications we all know you could buy yourself a very nice condo given what's gone into the engine alone.



Full points to ROTA Australia for coming on board with these P-45Rs in +20 fitment, perfectly suited to the GT-R's factory-pumped panels

VITALS

ENGINE: 2.7L RB26 six-cylinder turbo
POWER: 1072awhp
POWER FROM FACTORY: 280hp
POWER TO WEIGHT: 0.54kW/kg (Yep...)

ENGINE HARDWARE

N1 RB26 block (modified to Mercury Motorsport specification), full Nitto 2.7L stroker kit including Nitto fully counterweighted billet crankshaft, I-beam conrods, pistons and rings, custom Mercury Motorsport camshafts, Nitto oil pump, GReddy aluminium radiator, 16in Spal thermofan, ATI 1000hp balancer, Tomei lifters, valve-springs and retainers, Red R Racing race-ported head, Nitto oversized valves, GT4718R turbocharger, 60mm Turbosmart external wastegate, 6Boost titanium-wrapped exhaust manifold, 5in K&N pod filter, 700x300x150mm A'PEXi tube-and-fin front-mount intercooler, custom Mercury Motorsport 3.5in/4in piping, Turbosmart silicone hoses, Hypertune 90mm throttle-body and matching plenum, Red R Racing machining and assembly, 5in dump pipe (ends under passenger seat), ARP studs, Injector Dynamics 2000cc injectors (six), Hypertune fuel rail, Magnafuel fuel-pressure regulator and twin Pro Tuner 750 fuel pumps, custom Mercury Motorsport surge tank, braided fuel lines and Speedflow fittings, Autronic SM4 EMS and CDI, Mercury CDI coils, Nitto adjustable cam gears and clear timing cover

DRIVETRAIN

Six-speed manual, ORC twin-plate clutch

BRAKES/SUSPENSION

JBT eight-piston calipers and 380mm rotors front, JBT four-piston calipers with 355mm rotors rear, JBT brake pads and braided lines, Tein RA fully adjustable coil-overs

WHEELS/TYRES

19x10in +20 ROTA 'GTR' wheels, 275/35 Federal tyres

BODYWORK

Standard

INTERIOR

Bride Brix II front seats, Defi coolant-temperature gauge

MERCURY MOTORSPORT

2/278 Newmarket Road, Wilston, QLD, 4051
Phone: 07 3352 3363 or 0402 421 437

FINANCE AVAILABLE

Home of...
"NITTO"
1071AWHP R34 GTR
"GTR R35"
637AWHP R35 GTR

ENGINE PERFORMANCE UPGRADES!

- Engine building & conversions - from street to full race-spec
- Turbo upgrades including exhaust & intake manifolds, intercoolers, external wastegates etc.
- Custom fuel & ECU/ignition systems & custom wiring

CUSTOM DYNO TUNING - 2WD/4WD

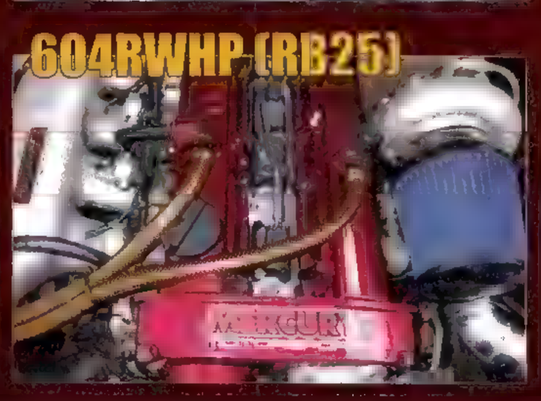
Professional IN-HOUSE dyno tuning service to tune most ECU's for any application on any fuel - street or race or both!

- Autronic
- ViPEC
- Microtech
- MoTeC
- WOLF
- A'PEXi
- ECUTEK
- NIStune
- VCM Suite
- plus more...

IN-HOUSE FABRICATION

- Superior in-house custom fabrication - alloy, stainless steel, mild steel, chrome-moly etc.
- Custom intercooler piping, oil catch-cans, overflow tanks, surge tanks, turbo dump pipes, complete exhaust systems, rollcages, parachute mounts etc.

- Specialists in high-quality performance upgrades & dyno tuning
- DRIVE-IN, DRIVE-OUT complete custom performance packages available including engine, driveline, suspension & brake upgrades - mild to wild, street to race!
- Agents for NITTO Performance Engineering, MRT Performance & JBT Brake System
- Distributors of Sucrogen (CSR) E85 race fuel - 108 octane rating!
- General servicing & repairs, mod-plating & roadworthy certificates



AUSTRALIA WIDE DELIVERY ON PERFORMANCE PARTS ORDERS!

Killer Bird

How's this for a neo blockbuster? A 1971 Datsun 510 Bluebird 1400 Deluxe unlike anything you've ever seen

Words and pics: Dino Dalle Carbonare

One of the biggest benefits of the 510 was the ease by which bigger L-series engines could be squeezed in. Few, however, make this much grunt

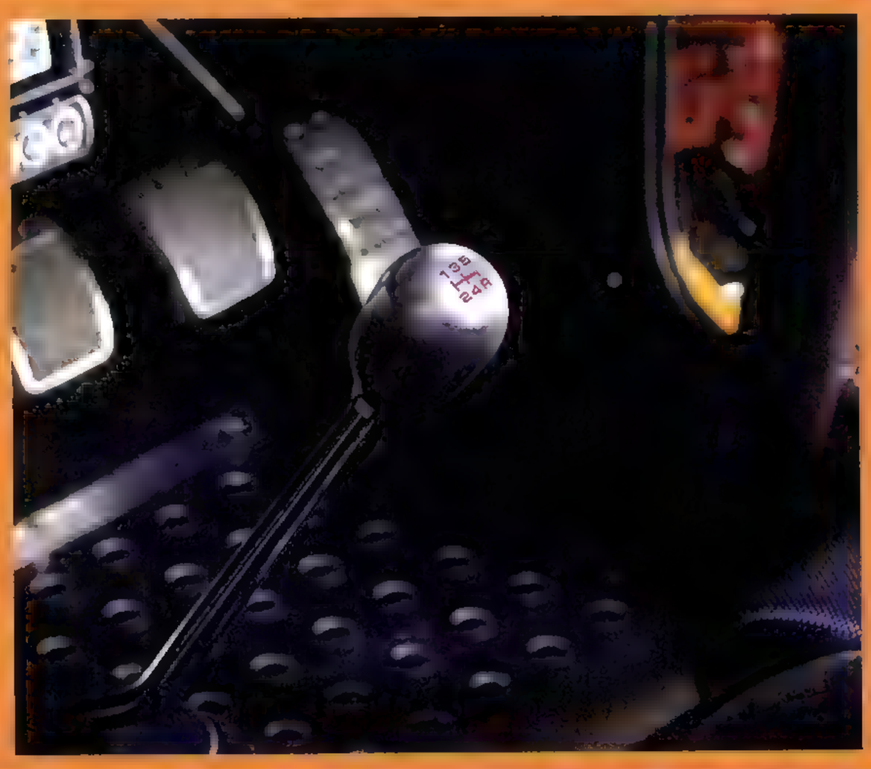
RETRO NIGHT

Inside, it's all about the details, and if you don't look close enough you may miss them as everything just looks so clean and almost factory.

The dash is spotless, not a single scratch or patch of discoloration, and is the perfect backdrop onto which to fit the line-up of Defi gauges that were chosen for their '70s-like green illumination.

The carbon centre console houses three to monitor water and oil temperature as well as oil pressure. The main instrument binnacle has been untouched aside from the Defi RPM meter, which gives a far more reliable and accurate reading much like the Auto Meter fuel gauge next to the Kenwood K-CD01 head-unit.

Carbon leather was used to upholster the padded roll-cage as well as the door cards, all accompanied with red stitching, which matches the stitching on the driver and passenger Recaro seats as well as the Nardi steering wheel. Takata harnesses complement the interior, and as a final touch Sugata chose an EK9 Civic Type-R titanium shift knob, a part that offers a tactile experience all its own.



Drive is sent to the modern, and very proficient, Nismo R180 rear LSD

The little Datsun 510 has always been a favourite among lovers of Japanese classics, a car that we may as well consider the Toyota AE86 of the 1970s. With a series of body shapes available to customers, the 510 sparked a broad appeal and became known in some circles as a 'poor man's BMW'.

For many enthusiasts, the 510 has been the gateway into performance motoring, which is pretty much what the owner of the 'Killer Bird', Sugata-san, initially thought when he first got his two-door Bluebird.

Problem is, he hasn't moved onto anything new, forced by an uncontrollable obsession to continuously perfect his car. The fruits of his labour have turned his 510 into a winner in car-show circles as well as a true performer when out on the road.

We met up with Sugata at Daikoku Parking Area, a place we seem to bump into each other quite often as he tries his hardest not to miss any big and important car meet. This time, however, Japan's most well known rest area is empty, a perfect chance to take a closer look at what has allowed the Killer Bird to snap up the Cool Award at the 2009 Mooneyes Hot Rods and Customs Show as well as the King of Cool prize at the 2010 Histrix Japan show.

The amber hue of the floodlights seems to almost match the dark Smash Yellow colour of the body, which was borrowed from the JDM Honda Life. The soon to be 40-year-old body was meticulously restored and painted by the people at Ghost Factory, who took their time in making sure the surface was nothing short of show-level.

Sugata had no intention of going too far with aesthetics, but simply injecting a little modern and custom feel into the looks by the addition of things like the Nismo LM GT4 wheels and later-model LHD silver-finish mirrors.

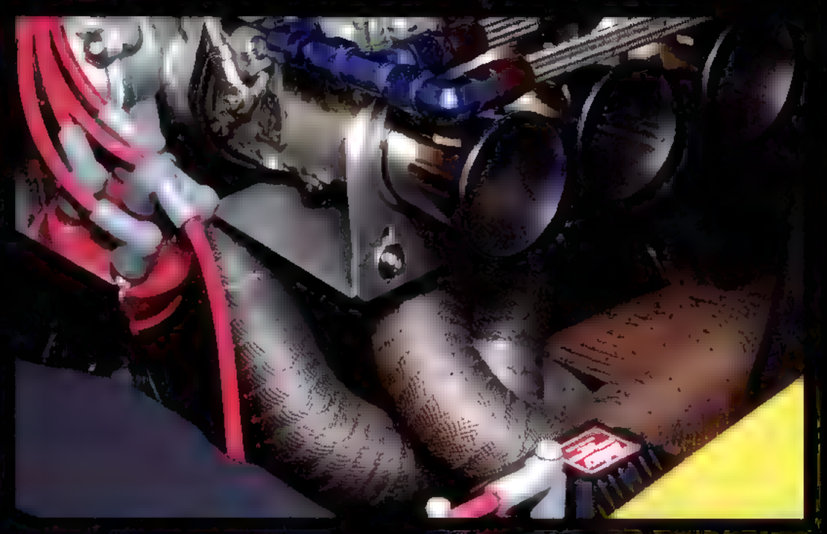
Under the original chrome front bumper a race-inspired fibreglass spoiler helps give the car a more ground-hugging look, while the carbon-fibre bonnet is almost unnoticeable, as it has been moulded around the same design as the factory item. A great classic touch are the bonnet pins, attached to the body by a safety wire that seems to disappear behind the headlights.

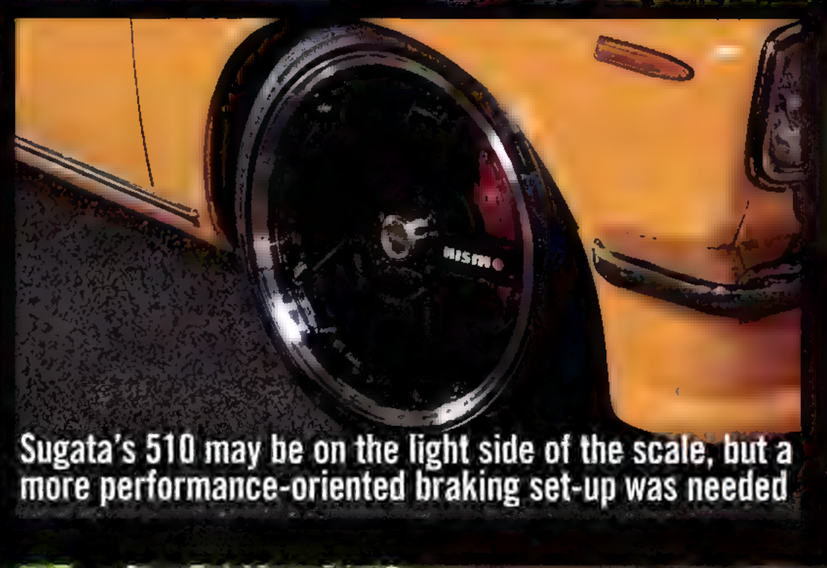
During the restoration all the rubber and metal glass trim was replaced as well as the glass itself, adding to the flawless look of the car. The rear has been kept stock and simple, with only the custom stainless exhaust and red toe hook hinting at how special the car is.

One step of the chassis and bodywork included the fabrication of a seven-point roll-cage, a must to give the little 510 a bit more rigidity. What followed in the build was the suspension, and this is where things get very complicated.

First up, the front struts were modified with Skyline GC10 items, there to offer additional stiffness. TRD racing dampers were selected for the front and mated to Zeal X-Coils 12kg/mm springs, while the Cusco pillow-ball upper mounts allow easy adjustment of camber. The rear received AE86 Tokico dampers joined by a very stiff Refresh GC10 22kg/mm springs.

To tighten up the geometry and handling feel, Techno Toy Tuning pillow-ball control rods joined custom made and extended lower control pillow-ball arms up front, with the rear being fitted with Refresh semi-trailing arm camber bushes. The suspension work was completed with Suspension Techniques front and rear roll bars.





Sugata's 510 may be on the light side of the scale, but a more performance-oriented braking set-up was needed

SUGATA'S ENTHUSIASM FOR HIS CREATION PUSHES HIM TO USE THE CAR AS MUCH AS HE CAN

Subtleness is key under the carbon-fibre bonnet, as the whole theme of the car is perfectly applied to the little four-cylinder that powers this Bluebird. The engine is built by Refresh 60 around an L20B engine block, fitted with a Z22 balanced crank and Z20 connecting rods. Kameari Engine Works lightweight forged 89mm pistons allow the capacity to grow to 2288cc, giving the potential for good power.

A Nissan Motor Works FIA racing head was sourced, ported and fitted onto the custom bottom end to create a rather special little motor. The Isky upgraded valvegear is controlled by a wild 300° camshaft from the same maker, carefully set up for a linear power delivery. System Science fabricated the 4-2-1 stainless steel exhaust manifold along with the full exhaust system, sporting just the right sort of 'cannonball' design highly strung naturally aspirated engines crave.

Taking care of the intake side and fuelling is a pair of Solex 50mm carburettors fitted with custom titanium velocity stacks for that extra modern touch. These allow the engine to express its fullest potential, managing to develop a little over that magic 100ps/L mark. Completing the engine work is the Datsun 1600 head cover, wet-sanded for a raw look.

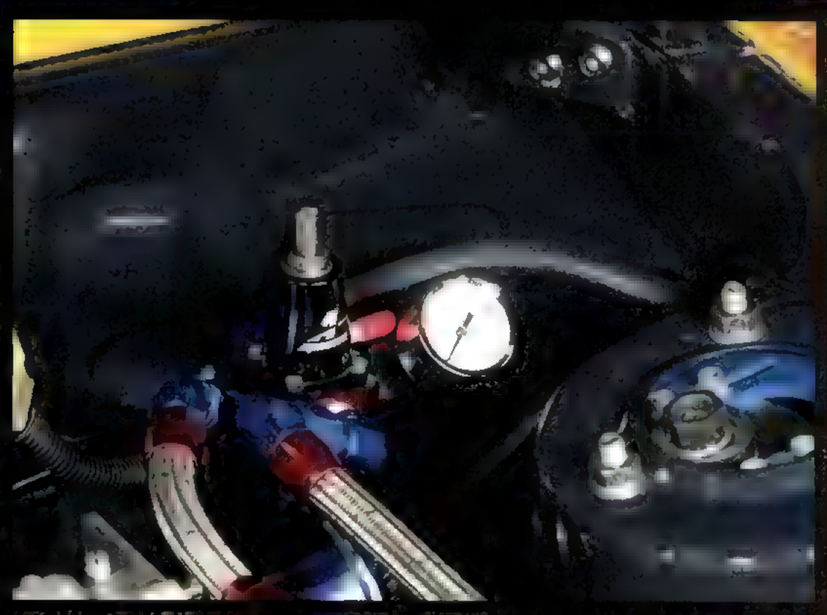
Seeing as the engine does develop a substantial amount of power, an R30 Skyline five-speed transmission was chosen and fitted with a full close-ratio gearset from Kameari Engine Works. This was mated to a Nismo Coppermix clutch and a JUN lightweight flywheel for the ultimate balance and response.

The MSD ignition wires, the Optima battery and the Earls fittings add a subtle addition of colour to the engine. Sugata even went to the trouble of having the whole engine bay painted in Audi TT dark grey, which was mixed with a barely noticeable fine red flake from House of Kolor. The same colour was used to spray the back of the carbon bonnet as well as the exposed metal, chassis and door metal in the interior.

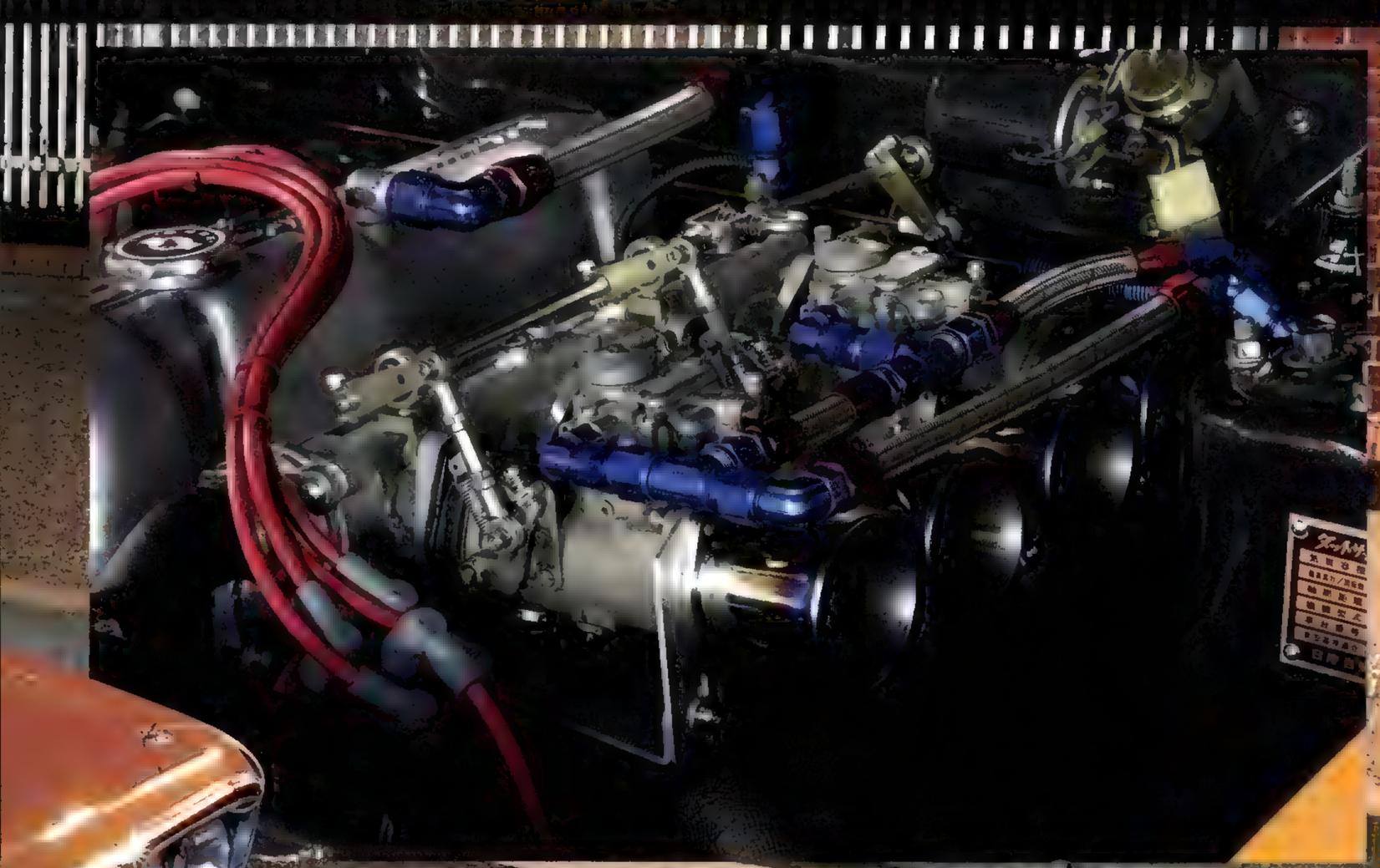
The Killer Bird may well look like a dedicated show car, but Sugata's enthusiasm for his creation pushes him to use the car as much as he can and not leave it in the garage in fear of getting it dirty. Put simply, it is the ultimate in personal custom motoring.

Special thanks: Firstly, a big thanks to all my friend's shops! Restoration and paint at Ghost Factory, engine mods at REFRESH 60 (http://refresh60.jp), exhaust system System Science, wheels customisation and paint at MAX, interior at Gotch, Specialtie Auto Works for fibreglass parts, stainless parts at Sakamoto Syoukou, billet parts at OK Works, titanium parts at Art Engineering, Solid Kustom Works at car show board. «

The Killer Bird has taken out the Mooneyes 18th Annual Yokohama Hot Rod Custom Show 2009 Cool award and Histrix Japan 2010 King of Cool award



All the gauges, including the Defis, were chosen for their patent '70s glow



VITALS

ENGINE: 2.2L L20B four-cylinder
POWER: 230hp
POWER FROM FACTORY: 100hp (L20B)
POWER TO WEIGHT: 0.12kW/kg

ENGINE HARDWARE

L20B engine block (2288cc), Kameari Engine Works forged 89mm pistons, Z20 lightweight connecting rods, Z22 crankshaft, Nissan Motor Works FIA ported cylinder head, FIA intake manifold, Isky 300° camshafts, valvesprings and retainers, custom 4-2-1 stainless steel exhaust manifold, 60 into 70mm cannonball exhaust system with 76.3mm tail, MSD distributor and Promaster coil, twin Solex 50mm carburettors, custom-made titanium velocity stacks, Earls #8 braided fuel lines and oil cooler, GReddy oil catch tank and oil-filter relocation kit, Automotive bypass-type fuel regulator, two Carter fuel pumps, T&E Vertex engine torque damper, DC Sports battery tie-down, triple-core racing radiator, wet-blasted Datsun 1600 head covers and intake manifold, Audi TT dark grey engine room colour with House of Kolor red flake

DRIVETRAIN

R30 Nissan Skyline five-speed transmission, Kameari Engine Works super close gearset, Nismo Coppermix clutch, JUN ultra-lightweight flywheel, Nismo R180 LSD, final gear 3.9, Syms R180 volume up differential fin cover

BRAKES/SUSPENSION

Cox monobloc four-pot calipers and Mugen S2000 300mm slotted discs, Datsun 240Z aluminium fin drum rear brakes, TRD racing front dampers, Endless Zeal X-Coils (12kg/mm front springs), GC10 Skyline modified front struts, Cusco pillow-ball upper mounts, Techno Toy Tuning pillow-ball tension control rods, custom-made 15mm extended lower control pillow-ball arms, Suspension Techniques front and rear roll bars, Tokico AE86 racing rear dampers, Refresh GC10 racing use 22kg/mm rear springs, Refresh semi-trailing arm camber bushes

WHEELS/TYRES

17x7.5in Nismo LM GT4 wheels, 215/35 Dunlop SP Sports Maxx tyres, 5mm front and 15mm rear spacers

BODYWORK

Full custom restoration, air dam-type fibreglass front spoiler, carbon hood, replaced glass with standard grade clear glass, Datsun original LHD grey-finish door mirrors, 1972 JDM final model converted front grille and tail-lamp assembly, Audi TT dark grey painted window trim, JDM Honda Life Smash Yellow body colour

INTERIOR

Seven-point roll-cage, padded and carbon-leather upholstered, ASM Recaro TS-G driver-side bucket seat, Recaro SR-3 passenger seat, Takata four-point racing harnesses, ASM Recaro seat fabric, Nardi 80mm deep cone 350mm steering wheel, Honda EK9 Civic Type-R titanium shift knob, Defi Link Meter, Auto Meter fuel-pressure gauge, Kenwood K-CD01 head-unit, custom aluminium foot plates and billet armrests, '70s Nissan Motor Works racing use wide room mirror, carbon-look full leather re-trim, all metal parts painted in Audi TT dark grey with House of Kolor red flake

THE SOON TO BE 40-YEAR-OLD BODY WAS METICULOUSLY RESTORED BY THE PEOPLE AT GHOST FACTORY

This VW 1500 notchback stopped by for a nosey

S30s were everywhere, in every colour, but with most packing highly strung L-series engines

Unlike local tracks, the Sendai strip has a sharp uphill trap at the end, giving it a faux 'downhill' appearance

Some of the best cars were found kicking weeds, like this dish insanity

RETURN TO SENDAI

It's been a long time since we checked out drag-racing in Japan, but the scene was well and strong at G-Works Sendai

Words and pics: Dino Dalle Carbonare

The Kamata Pro class FD launched into the nines

A lot of factors contributed to the demise of the Japanese drag scene, which for over 10 years was by far the prevalent form of tuning. Tightening regulations, a progressively worsening economy and a lack of new cars to tune all helped bring an end to over a decade of high power-fuelled excitement. Time attack and drifting are the new fads, so to speak, but a recent trip up to the Japan Drag Raceway in Sendai Hi-Land perfectly illustrated that drag racing is still very much alive.

We heard that G-Works Magazine, a publication primarily dealing with performance-tuned Japanese classics, was holding a drag meeting at what is the only official drag-strip in Japan, and even if it was a good five-hour drive from Tokyo, we headed up to get a glimpse at vintage drag racing.

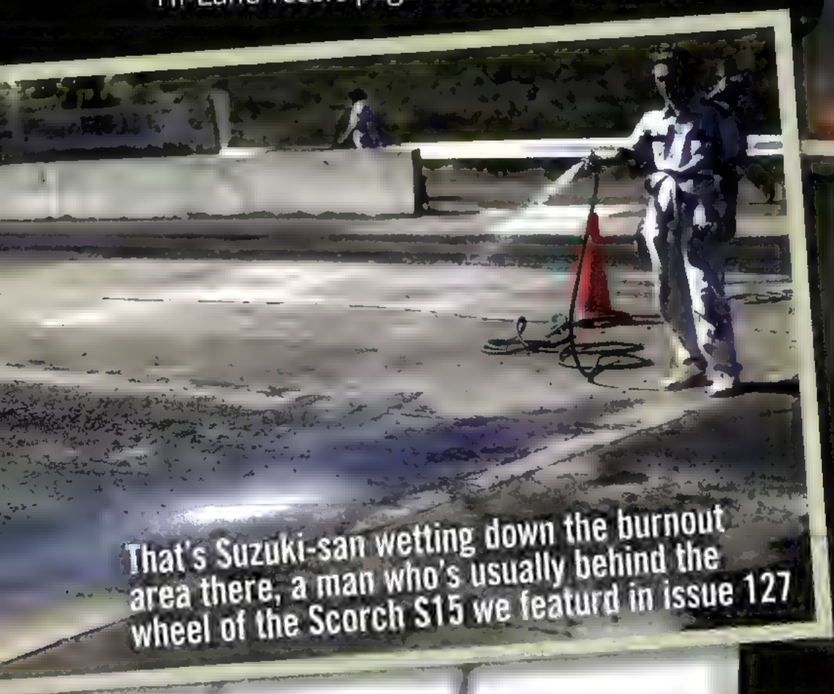
The paddock at Hi-Land was nothing short of

GETTING HI

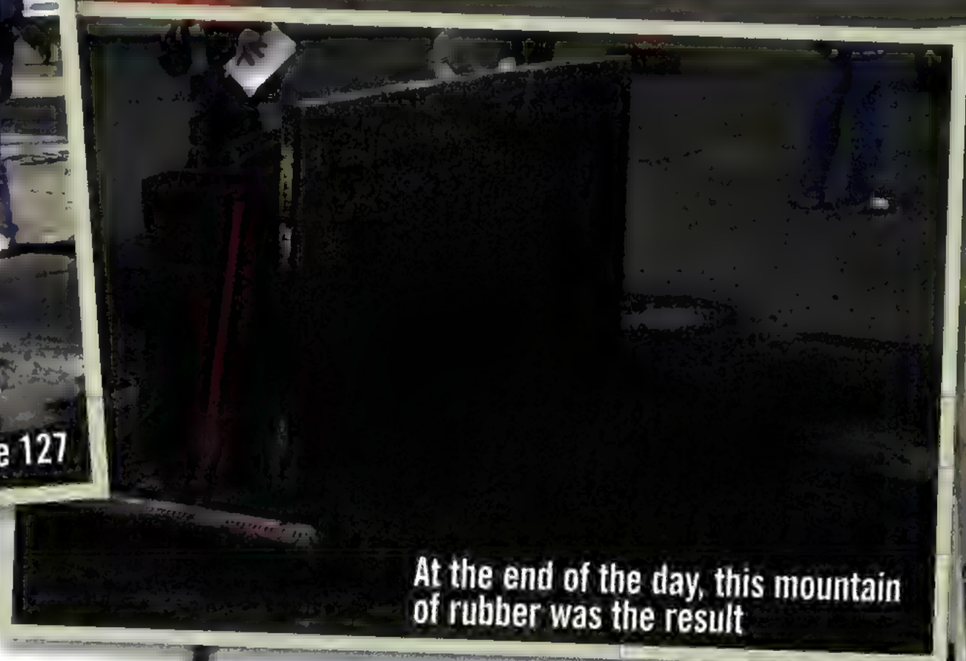
Sendai Hi-Land has a true Japanese flavour to it that makes it one of our favourite race locations. The actual racing track itself may be small, but it packs in a number of tight corners, with constant elevation changes that make it highly challenging to those not familiar with the layout. Should that bore you, there's also a nearby kart track, golf course and even an amusement park.

You can check out the official Sendai Hi-Land resort page at www.hi-land.co.jp.

This 610 Bluebird four-door, one of the more extreme camber-wearing cars, had some trouble coming off the line cleanly

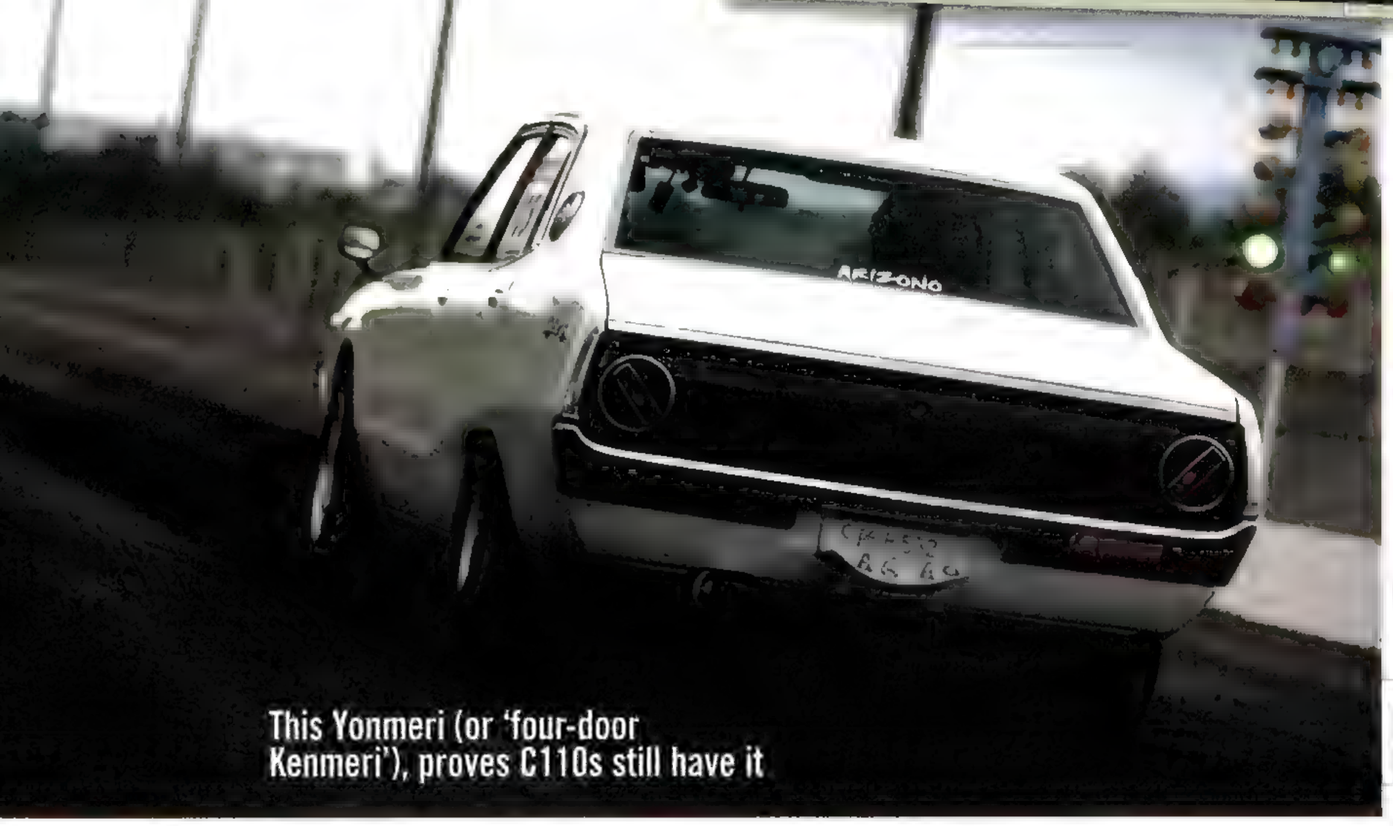


That's Suzuki-san wetting down the burnout area there, a man who's usually behind the wheel of the Scorch S15 we featurd in issue 127



At the end of the day, this mountain of rubber was the result

It was a weak-sauce 13.68sec pass for this Gallardo thanks to va 'rolling' start. Dump that clutch, we say



This Yonmeri (or 'four-door Kenmeri'), proves C110s still have it

This competitor took 'drag camber' to new extremes

This beautiful A20 Celica sounded spot-on with its Solex carbs, but it didn't seem to get out much

A different kind of 'stance' for this Z

This Datsun 510 was really ripping it up in the burnout department

Burnouts came easy on the already slippery, and then watered down, Sendai surface

This should be a more familiar sight...

breathtaking, lined with the sort of vintage rides that are mostly never associated with drag racing. What we instantly noticed was the obvious feel of authenticity of almost all of the cars present, a great deal of them preferring to use period-correct engines instead of dropping in highly tuned modern motors.

We spoke to the owner of an S30 Fairlady Z, probably one of the most popular cars in the scene, asking him why he didn't just drop a 1000hp RB26 into his Z. He explained that there is a lot of pride with owners of this generation of cars, and most are out to push the original vehicles to their limits without taking the easy way out. As he put it, "Anyone can do that!"

To modify an L28 and achieve 11sec passes takes a lot of skill and knowhow, and that is what it's all about. So, carburettors were the order of the day, and almost all of the older cars were naturally aspirated. It might have made for some rather slow passes compared to what we are all used to seeing in modern drag racing, but that would be missing the point.

There was definitely a sense of occasion seeing cars like KGC10 and PGC10 Skylines on big drag slicks pulling massive burnouts before shooting down the tarmac in a concerto of single overhead cam madness.

But it wasn't all Skylines and Zs. Smaller cars like the Sunny and Bluebirds seemed to have quite a following with a little group of owners representing the little boxy Datsun with a complete selection of wagons, sedans and coupes. We also spotted a few A20 Celicas and TE27 Levins representing the Toyota camp.

Showcasing a more modern feel were the boxier Skylines and RX-7s of the '80s, adding an equally unique character to the event. We even spotted a very rare R30 Skyline hatchback!

All cars were subdivided into groups to keep competition between everyone fair, with the more built pro cars getting their own dedicated class. G-Work usually features the odd modern car in its magazine, so it's not

You want rare? This RHR30 GT-EX Skyline hatchback is up there, here running a modified L20E turbo with Volk CE28Ns

With only a Gruppe-M airbox, this C63 AMG on Volk Racing G2s fired away thanks to its 6.8L V8. It ran a 12.31

It wasn't just the four-wheelers giving the strip a crack either...

This BNR33 wasn't messing around, laying down a 10.23 here

This Pro Class Viper-esque FD ran consistent nines, making it one of the quickest vehicles in attendance

surprising that a couple of non-classics joined the line-up, with a few R32 and R33 GT-Rs in the AWD showing what grip is all about as well as a few pro rotaries that all run in the nines.

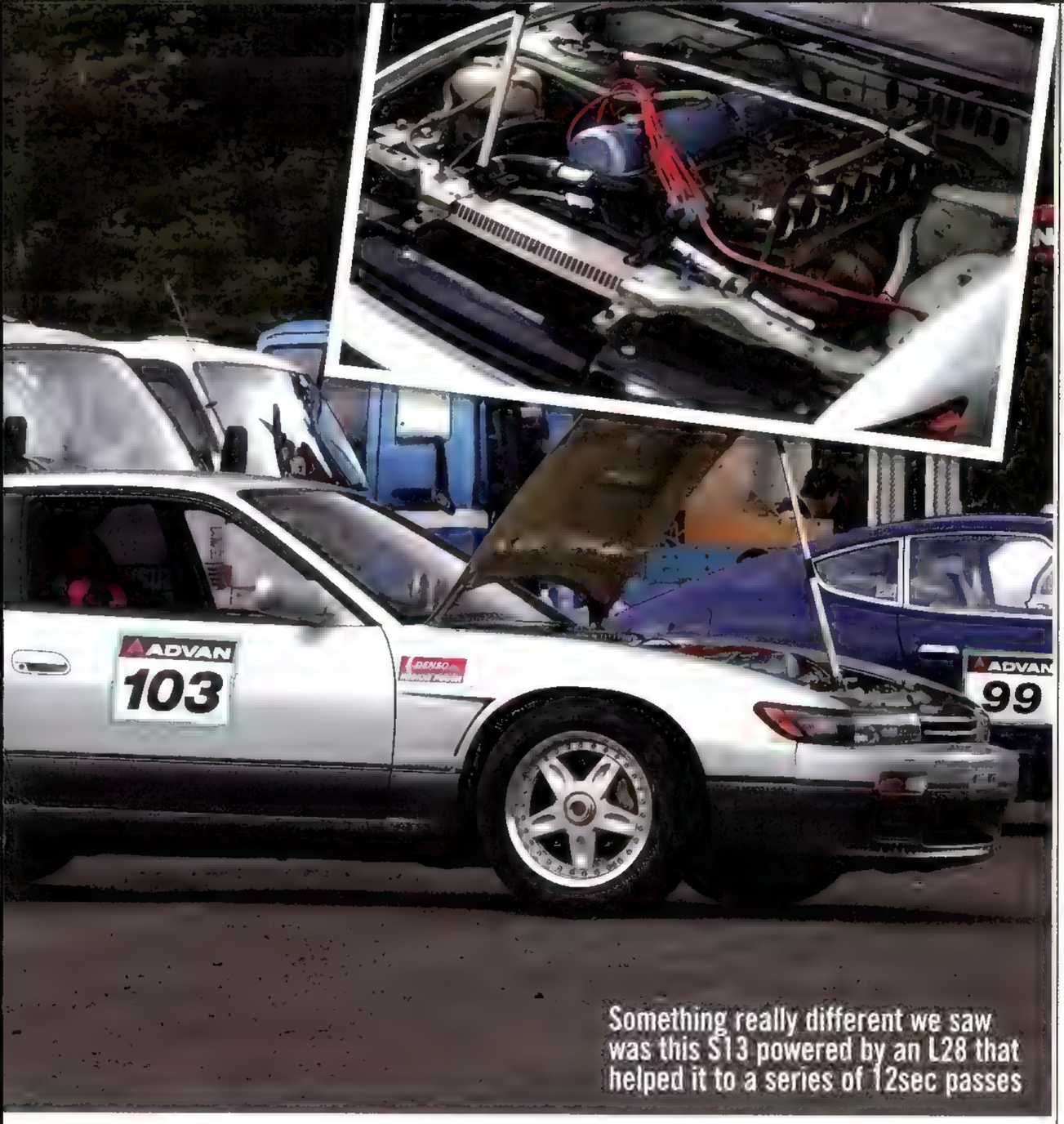
The biggest surprise, however, was the Scorch Racing Supra, built in collaboration with Blitz. The car debuted at the Tokyo Auto Salon back in 2008, but it was its first outing on track. It managed 9sec flat, but was bogging down badly on launch. There is still a lot of work to get the best out of it, and judging by the fact it runs a stock bottom end and head, it didn't do too bad. The idea is to push the motor until it blows before going into the second phase of the project.

After years of countless time attack and drift events, this vintage drag meet was a pleasantly refreshing look at a side of the Japanese car culture most seem to have forgotten. Needless to say, we will be back for more at the earliest opportunity. «

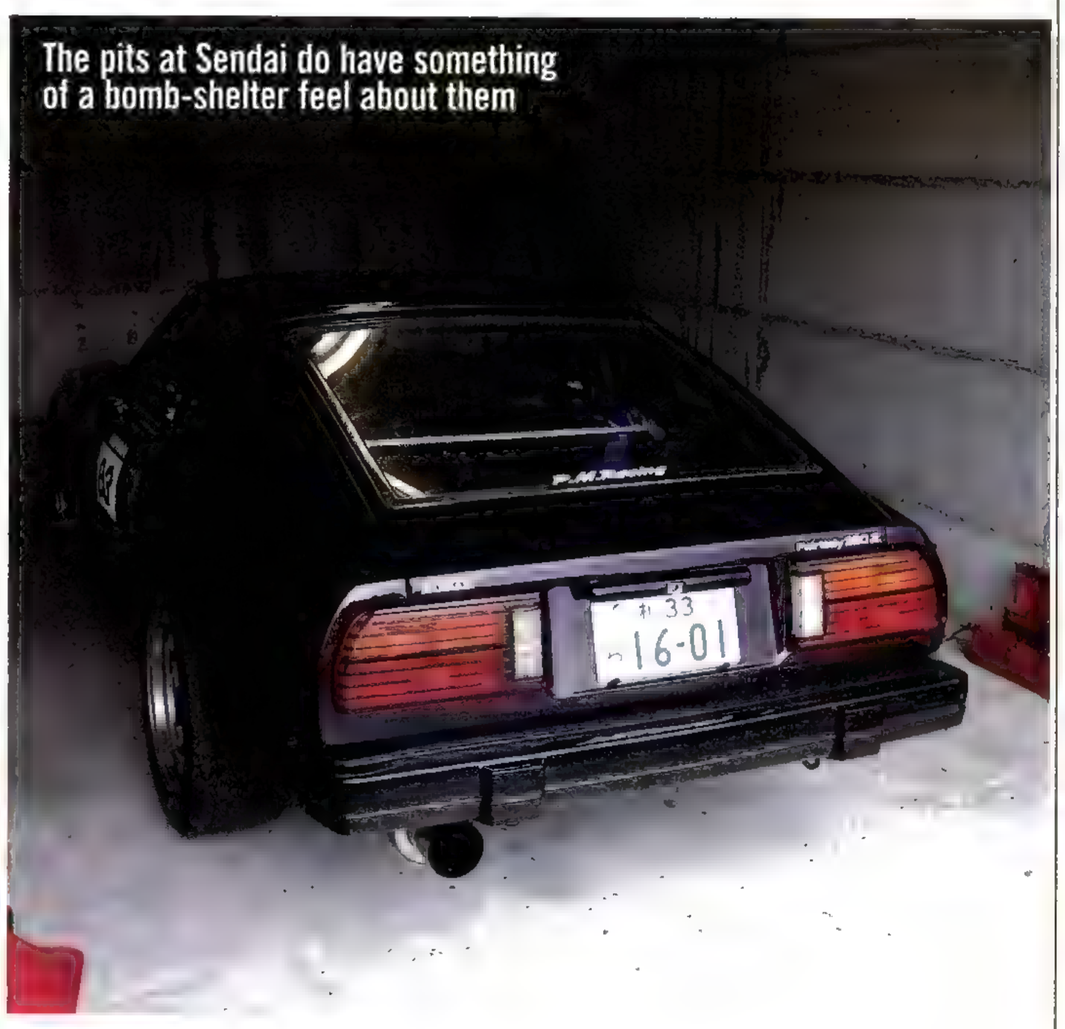
NÜRMAL?

Apart from the L-series Silvia, the other crazy conversion that caught our eye was this C210 Skyline sedan with an RB26DETT under the hood complete with twin T517Zs for 550hp.

The car also had something of a Nur feel to it, featuring the same Millennium Jade colour as the 1000 limited-edition V-Spec II Nurs released in 2002. It also had a Nur engine, with N1 block and balanced bottom end, as well as the requisite badging at the back to fool purists.

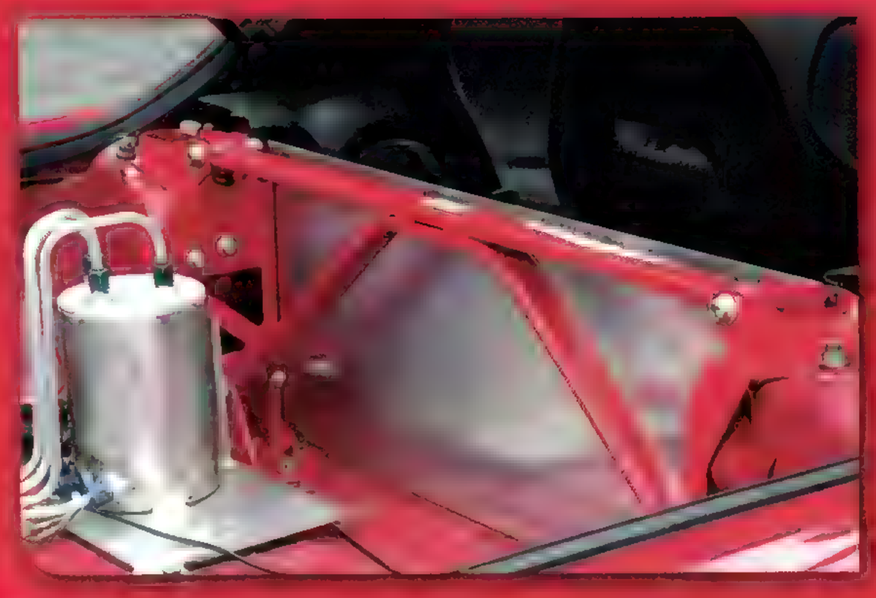


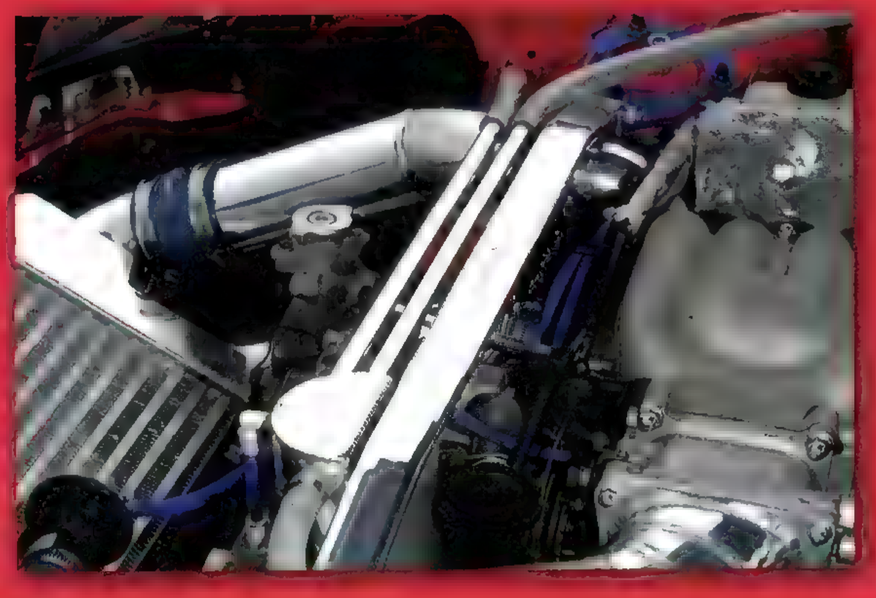
Something really different we saw was this S13 powered by an L28 that helped it to a series of 12sec passes



This C130 Laurel SGX was our favourite car at the event thanks to its clean butaketsu rear, Equip 03s and flame-throwing exhaust

Your One Stop EFI Conversion Shop
Custom fabricated manifolds, Pleniums and Throttle Bodies to suit any application. Large range of Ram Tube sizes available.
Injectors from 120cc to 1500cc/per mn Bosch, Delphi, Rochester, Nippon Denso & SARD- Side Feed, 14mm & 11mm Oring Types.
Liftpumps & EFI Pumps from 120 litres/hr to 750 litres/hr (2000HP). Walbro, Bosch, Carter Facet & Nippon Denso.
Engine Management Systems.
efi HARDWARE
www.efihardware.com
7 Monomeeth Drive, Mitcham
Victoria Australia 3132
Tel: 03 9873 5400
Fax: 03 9873 5955
Email: Info@efihardware.com
NEW WEBSITE
www.efihardware.com





WINGMAN

RE-Wing's Takeo-san shows us his prize RX-7 demo car... all 520hp of it

Words and pics: Dino Dalle Carbonare

Modesty. It's something that reigns prevalent in Japan, a refreshing attribute to see for those coming from the western world. It's what makes the whole country and culture so attractive, as well as the foundation of the underlying respect people have for each other. Take Takeo-san of RE-Wing, for example.

As he talks us over the RX-7 we are here to see, he seems to almost shy away from its achievements and the fact that it looks impossibly unique in a sea of otherwise similarly modified cars.

After seeing it out in anger at time-attack events and under the show lights of the Tokyo Auto Salon, it was about time to dedicate some space to it. After all, it is not every day you get to see a street car so special it can lap Tsukuba circuit in 58.2sec! For anyone in the know, that takes a very special machine.

RE-Wing is your typical inaka, or countryside, tuning shop. It's located out in the sticks and comfortably survives by looking after local modified cars. As Takeo-san explains, it all used to be about drag racing back in the heyday of the tuning revolution, when so many shops in Japan got started. That kind of died down and over the years everyone has shifted towards creating great everyday rides with plenty of power but still legal for use on the streets.

For this reason, the FD3S that Takeo-san uses to showcase his company's capabilities is legal enough to still wear a numberplate, just, but packs enough performance to show more extreme cars a thing or two.

Modesty was probably the main driving force in creating this car. Takeo-san may not admit it, but every detail of this car is a testament to not only his capabilities as a tuner, but a good dose of taste.

Take the exterior, for example. It's so simple it has you scratching your head at why it looks so damn good. There are no wide-body kits that completely alter the design of the car; just a series of well-chosen parts like the front MazdaSpeed bumper. It's not a piece you often see used, probably because it was ahead of its time when it was originally released, maybe overshadowed by the much more fashionable RE-Amemiya kits.

This bumper incorporates a lower lip spoiler and canards, and enough openings to feed coolers with plenty of fresh air. The pop-up headlights are gone and replaced with a pair of far more eye-catching RE-Amemiya twin projector units. The bonnet is an original, designed by Takeo-san and featuring a large V-shaped louvered series of outlets to help keep the 13B nice and cool. For added effect, the bonnet hinges are spaced for that true track-car feel.

The profile almost looks naked, especially compared to the wilder kits for the FD3S that are out on the market. Takeo-san has kept it very simple, stock front fenders and side skirts, but to give it a more menacing stance has quite visibly widened the rear fenders. This was carried out very subtly following the lines of the stock arches, and it has all been professionally done in steel by a bodyshop.

Outrageously big carbon GT wing and rear diffuser aside, the aesthetic modifications end there, but are just enough to give a feel of uniqueness to this fire-red RX-7. The lightweight Enkei NT03+Ms are a very good choice of wheel, with their unmistakable webbed spokes and twin valve system to help fill the tyres with 100-percent nitrogen gas. The white 10Jx18in Enkeis are wrapped in Yokohama Advan A050 semi-slick tyres in the usual 265/35R18 sizes almost everyone uses in the time-attack scene.

Helping the body sit at just the right height for comfortable street use are the special RE-Wing adjustable Crux dampers mated to Swift springs, which, judging by their 18kg/mm rating front and rear, might not offer the smoothest ride around town. The suspension struts are stiffened with a GReddy bar up front and a more complex AutoEXE item at the rear, which also braces to the body for added functionality.

Big four-pot Brembo F40 calipers offer a welcome upgrade to the braking, which is also fitted with a Wilwood balance adjuster and Seido-ya high-friction brake pads. With 520hp available at each prod of the throttle, upgrades like this are a necessity, especially when taking the car to the track.

Pop the lightweight RE-Wing bonnet and one look at the 13B will tell you that no corners were cut in this build. Takeo-san did all of the work himself and, starting with the motor, installed specially made and heat-treated three-piece apex seals, along with springs made to perform well even with higher boost applications. The engine was then side-ported to help get the most in terms of power and response, and give it that unique and menacing rotary low-RPM burble.

Taking care of the force-feeding is the externally 'gated Trust T78-33D turbocharger breathing through a custom large-diameter intake pipe and custom cold air feed. The one-off racing titanium exhaust channels exhaust gasses all the way to the back and out from the downward curved tailpipe.

The engine makes it peak 520hp figure at 7000rpm, sounding fantastic with its side-ported 13B

IT IS NOT EVERY DAY YOU GET TO SEE A STREET CAR SO SPECIAL IT CAN LAP TSUKUBA IN 58.2SEC

Yep, the numberplates mean the FD is (barely) street legal

Almost all very serious time-attack cars we come across use an HKS Circuit Attack Timer

RE-WING VS FERRARI

So, considering the RX-7 is running F40 brakes, just how would the rest of the car compare to one of the greatest Ferraris of all time?

They're both on par in terms of top speed, considering the F40 was once the world's fastest street-legal production car at 320km/h. Given the carbon bits, stripped interior and so on, the RE-Wing car is also moving close to the F40's 1100kg weight figure. Both use manual transmissions, though the F40 is eclipsed by the RE-Wing RX-7 in terms of outright power, at 520hp versus the F40's 471. It must be kept in mind, however, that the F40 might have the aero advantage, with a low CD of 0.34.

But the trump card? The fastest time for an F40 around Suzuka was 2:25.26 in 1987, smashed by the FD with a 2:18.

Win, RE-Wing RX-7!

Here's the FD at Tsukuba last event. Note the canards and old graphics

All the inlet piping was fabricated in-house and is of a much larger diameter than is often seen. This connects up to the one-off end tanks of the custom V-mounted intercooler, which help promote flow through the thick HPI core.

The RE-Wing large-diameter throttle is the final piece of the puzzle, channelling air to the intakes, where it is met with the increased flow of fuel from the four Bosch-fed Sard 1000cc/min injectors.

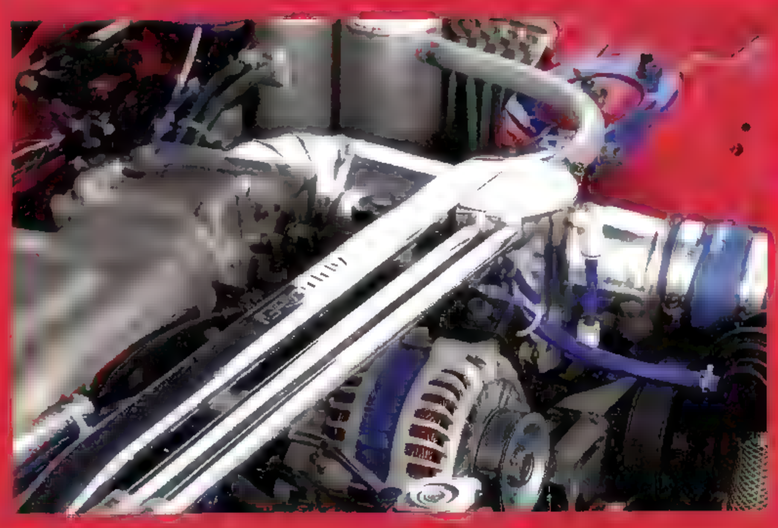
Takeo-san chose to use an HKS F-Con V Pro ECU, custom mapped to extract a healthy 520hp and 52.8kg/m of torque. Seeing the car is set up mainly for track and fast road use rather than high speed, a close-ratio Route 6 kit was fitted, which brings the first three gears closer together. Driveline modifications include an OS-Giken twin-plate clutch and a smooth-acting ATS carbon LSD.

Not wishing to take any chances when going flat out at the time-attack sessions the car often participates in, Takeo-san also fitted a very large transmission cooler that he positioned on one side of the rear carbon diffuser so it can take full advantage of the air passing under the car.

Functionality rules in the interior. Creature comforts have been sacrificed for a more performance-oriented ambiance, which starts off with the Bride bucket seat and ATC racing steering wheel. RH9 harnesses are added for extra safety, but no roll-cage has been installed to help the car enter in the street class at time-attack events across the country.

The RE-Wing instrumentation reads to 10,000rpm on the rev counter and 320km/h on the speedometer – not quite enough to show the true top speed of the car, which has been clocked at 322km/h. An HKS Circuit Attack Timer and Blitz SBC-iD boost controller are the only additional modules used.

In many ways, cars like the RE-Wing RX-7 are refreshing to see, as they don't rely on the fame of the shop to gain respect. This car has performed well, not to mention proven its capabilities, and Takeo-san lets these speak for the car, as there is nothing else that needs to be added. Modesty is indeed very refreshing.«



VITALS

ENGINE: 13B rotary turbo
POWER: 520hp
POWER FROM FACTORY: 280hp
POWER TO WEIGHT: 0.28kW/kg

» ENGINE HARDWARE

Side port, three-piece apex seals, Trust T78-33D turbocharger, RE-Wing full titanium exhaust system, custom large-diameter intercooler piping kit, RE-Wing V-mount kit, intercooler using HPI core and big-diameter throttle-body, Bosch fuel pump, custom surge tank, braided fuel lines, four Sard 1000cc/min injectors, RE-Wing racing aluminium radiator with air separator tank, oil catch tank system and oil cooler, HKS F-Con V Pro ECU

» DRIVETRAIN

Route 6 close-ratio transmission (first three cogs only), OS-Giken twin-plate clutch, ATS Carbon LSD, RE-Wing transmission cooler

» BRAKES/SUSPENSION

Brembo F40 four-pot calipers, Wilwood brake-balance adjuster, Seido-ya brake pads all 'round, RE-Wing custom adjustable Crux dampers, Swift springs (18kg/mm front and rear), GReddy front strut tower bar, AutoEXE rear strut tower bar

» WHEELS/TYRES

18x10in, Enkei NT03+M wheels, 265/35 Yokohama Advan A050 semi-slick tyres

» BODYWORK

MazdaSpeed front bumper, RE-Amemiya front headlight conversion, RE-Wing custom widened rear fenders, aero bonnet, carbon rear spoiler, carbon rear diffuser and graphics

» INTERIOR

Stripped interior, Bride Low Max racing bucket seat, RH9 five-point original racing harness, ATC steering wheel, Blitz SBC-iD boost controller, RE-Wing meter set (320km/h and 10,000rpm), HKS Circuit Attack Timer

THE RE-WING INSTRUMENTATION READS TO 320KM/H – NOT QUITE ENOUGH TO SHOW THE TRUE TOP SPEED OF THE CAR AT 322KM/H

The FD has recorded a best time of 58.2sec and a very quick 2:18 around Suzuka, with more to come

VIVAGARAGE - YOUR BODYSTYLING SPECIALIST

CALL 08 8371 3388 NOW!

TYPE 1 STYLE

Available in 180SX, S13, S14, S15, R32

TYPE 2 STYLE

Available in 180SX, S13, S14, S15, R32, R33, Chaser JZX100

TYPE 3 STYLE

Available in 180SX, S13, S15, R32, R33 Chaser JZX100, RX-7 FC/FD, Supra

TYPE S STYLE

Available in 180SX, S13, S14, S15

TYPE D1 STYLE

Available in 180SX, S13, S14, R32, R33

Wide Body Kit

Available in 180SX, S13, S15, RX7 FD

TYPE 4 STYLE

Available in R33 Coupe & Sedan

TYPE F STYLE

Available in 180SX

TYPE MS STYLE

Available in C34 Stagea S1 & S2

TYPE DL STYLE

Available in R32, R34 GTR, 180SX

TYPE BX STYLE

Available in R34 GTT Coupe

TYPE D1 Front Lip

Available in R33 Seres 2, R34 GTT Series 1

Roof & Boot Spoiler

Available in 180SX, S13, S14, S15, R32, R34, SOARER, CHASER

Bonnet

Available in S13, S14 S2, S15 180SX, R32 GTST, R34 in black Carbon

Front & Rear Fender From 25mm to 50mm

Available in 180SX, S13, S14, S15, R32, R33, R34, V35, C34 Stagea

Checker Mats

Available for 180SX, S13, S14, S15, R32, R33, R34, V35, A31, 350Z, JZX100, Aristo

Available in Red, Yellow, Blue or Grey

VIVAGARAGE

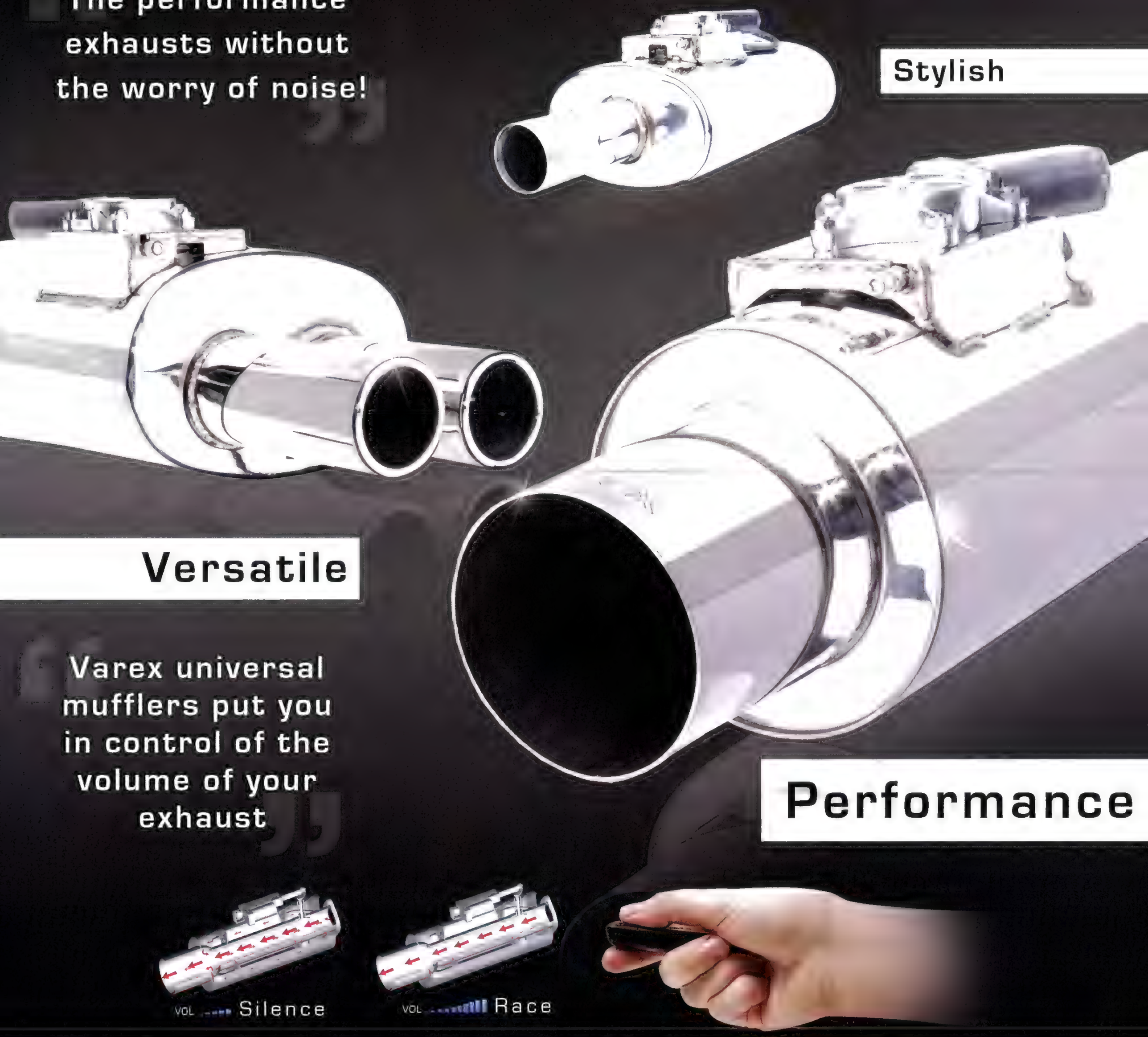
500 South Road, Kurralta Park, South Australia 5037

Email: sales@vivagarage.com.au , Web: www.vivagarage.com.au , Phone: 08 8371 3388 , Fax: 08 8371 3588

VAREX

WWW.XFORCE.COM.AU

"The performance exhausts without the worry of noise!"



Stylish

Versatile

Varex universal mufflers put you in control of the volume of your exhaust

Performance

The only performance exhaust with remote volume control.

*New Automode allows the user to automatically adjust the volume according to the set engine RPM

XFORCE

PERFORMANCE EXHAUST

NATION WIDE ENQUIRY

NSW: 02 9793 7338 VIC: 03 9350 1977 SA: 08 8277 3344
QLD: 07 3808 9388 WA: 08 9249 1900 NZ: +61 0 526 5021

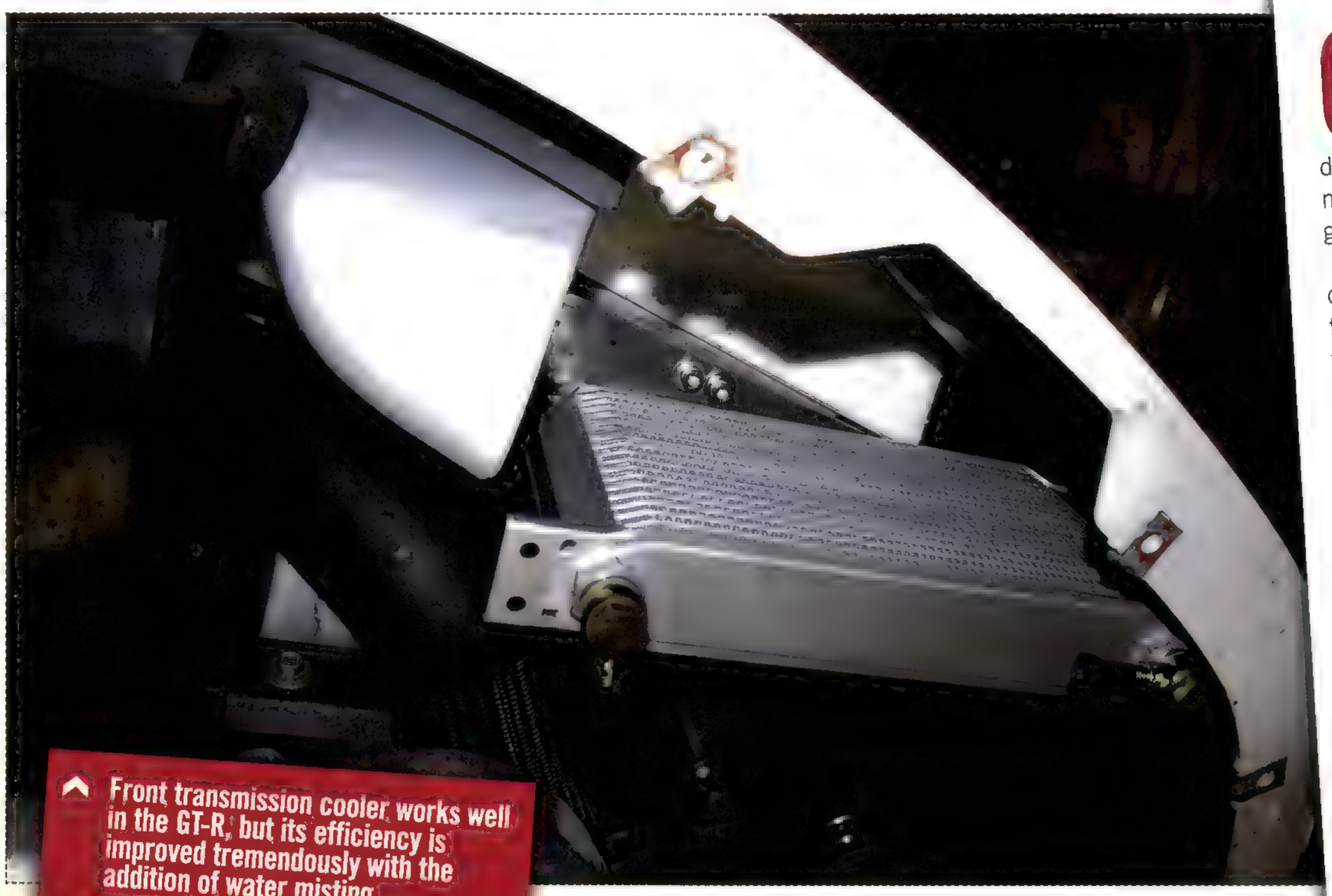
WWW.XFORCE.COM.AU MAIL@XFORCE.COM.AU

MIST COOLING

Words and pics: Martin Donnon

The mist block in action showing the low volume of water that comes from the jets in tiny droplets

The benefits of mist cooling can be considerable, so why does no one know about it?



Front transmission cooler works well in the GT-R, but its efficiency is improved tremendously with the addition of water misting

One of the complexities of modern Performance Imports is the tight packaging around the front of the car. With all-wheel-drive systems, intercoolers, intricate front bar designs and the general fussiness that makes up the nose of today's vehicles, it's quite often that cooling gets compromised in high-duress conditions.

Not often will you see high temperature issues on the road, but as soon as you up the ante at the track, the problems will start to come thick and fast. What kind of problems? Well, take our current experience on board for a moment.

Take one R35 GT-R and throw three or four laps at the car on a hot day. Within this time the engine oil temperature will be in the red, the coolant temperature will be up over 100° and the transmission will be pushing the dark side of 130.

The same kind of story gets repeated for a selection of current high-performance cars, with the Evo X being not really much better having a twin-clutch transmission that's prone to over-temperature events.

Even the current-model STi has a temperature indicator on the dash to warn when the rear differential has gone past its 'safe zone'. Higher power levels and restricted airflow has really put the wood on these cars, and if you want to run both long and fast, you really need to address this by keeping the temperatures under control.

THE NORMAL WAY

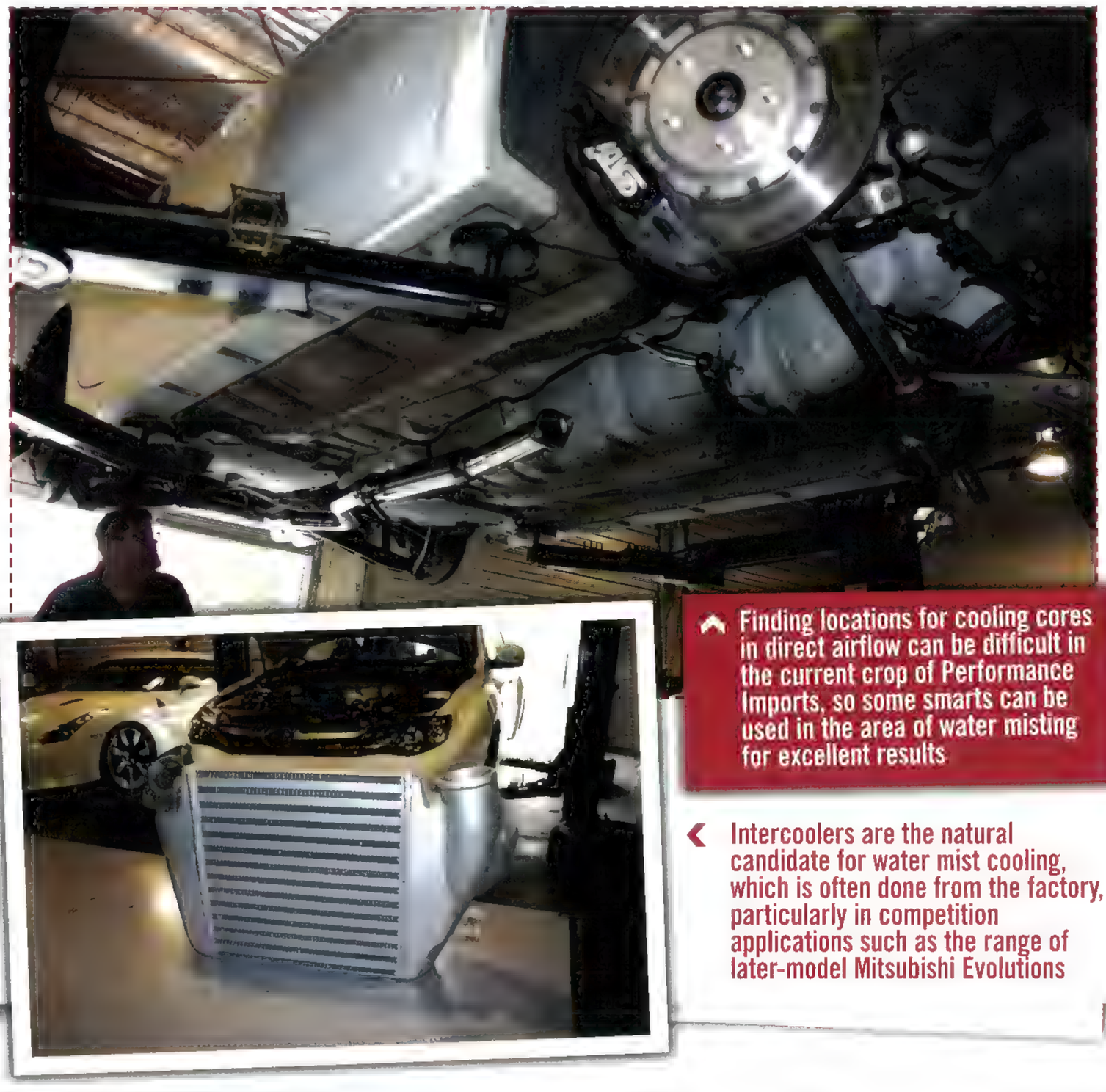
Any motorsport engineer will tell you that the fix for these overheating problems is a simple one – add more and bigger coolers to any system and eventually you are going to stop the trouble. This is a tried and proven technique that will work in most any application that is providing you actually have the ability to package a whole raft of coolers in a place where they will receive some kind of decent airflow. It doesn't matter how big or how many your coolers you have if they receive no air.

The issue here with all of the cars that we have mentioned is that the frontal airflow path of the car is extremely compromised with big factory coolers already in place (or, in the case of the STi, nowhere at the rear to get good flow).

The mistake some will often make is to replace high-quality factory coolers with cheaper and less effective aftermarket types, which in a lot of instances actually go backwards. A good example is the R35 GT-R, for which there are a raft of aftermarket engine oil coolers, none of which seem to perform as well as the original factory piece. Go figure.

The answer then would seem to be to run a higher cooler count. Instead of having one oil cooler, have two... and so on, but who wants to cut up the front of their Performance Import to stuff these extra cores into place?

There is also the issue of placing coolers in front of coolers, with it being a negative gain to place a large engine oil cooler in front of an intercooler or radiator. Following recent track frustration in this area, we have come up with a solution...



Finding locations for cooling cores in direct airflow can be difficult in the current crop of Performance Imports, so some smarts can be used in the area of water misting for excellent results

Intercoolers are the natural candidate for water mist cooling, which is often done from the factory, particularly in competition applications such as the range of later-model Mitsubishi Evolutions

THE GREAT H_2O

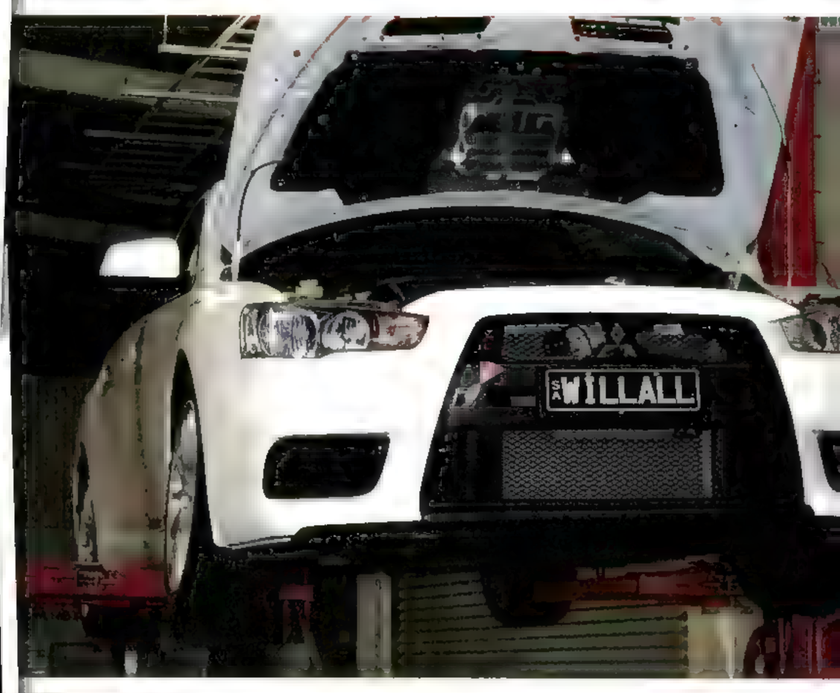
It's simple physics to understand that spraying water on anything is going to cool it down. From brakes to oil coolers, there is nothing that beats spraying water onto a cooler to improve its efficiency. The answer to our track cooling problems then is in the correct and judicious use of water spray on the cooler surfaces to drastically reduce the temperatures that we have been seeing.

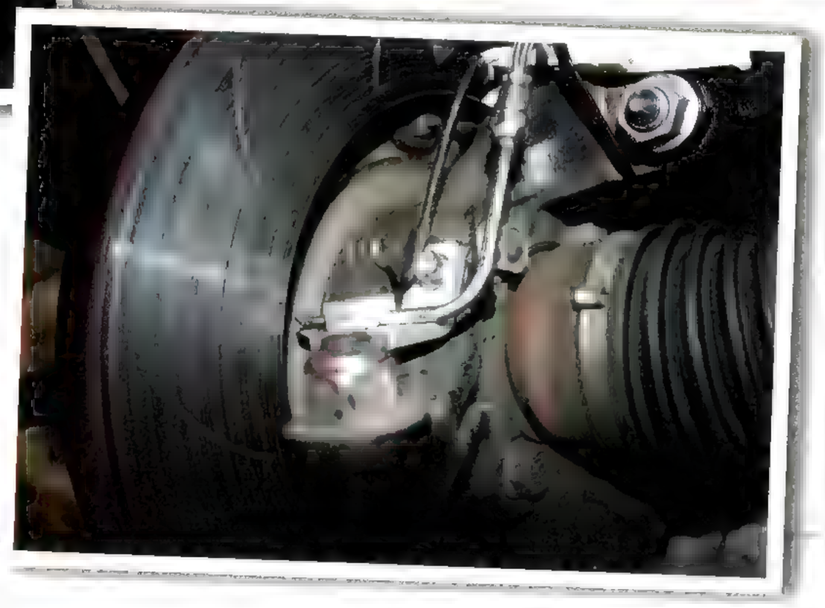
We have spent some time recently using direct water injection on braking systems to improve their efficiency, and the reality is that when squirted via a nozzle in a jet-style pattern directly into the eye of the disc brake, it's possible to quite literally remove hundreds of degrees from the temperature of the brakes.

Up to and just over a litre per lap of water can be injected into standard road car or slightly upgraded brakes to give them the 'hot' performance of genuine track units without the major expense of component changes.

Such is the temperature of the brake disc (up to 850°C when critically hot) that significant amounts of water can be injected into the disc centre, and there will never be any evidence that it's occurred when back in the pits. Before the water even touches the brake disc it is steam and the cooling effect is already in full swing. This requirement and application, though, is very much different to that of a cooling core.

A 'mist block' in place to cool the engine oil cooler of a GT-R. This is a plastic block we engineered to hold a pair of misting jets





A control panel for water cooling showing the switch for brake water injection, and 'oil' to control misting over the engine oil cooler and transmission cooler. The results when switched to 'on' are phenomenal

Injecting water into brakes requires a complete jet of water through a nozzle as shown here, which is different to misting. Don't confuse the two

PLATINUM
RACING PRODUCTS

DISTRIBUTERS ARE:

- ENVY IMPORTS & DYNO 9907 4144
- HI OCTANE RACING 9638 4643
- SYDNEY AUTOMOTIVE IMPORTS 040[illegible]
- TUNEHOUSE 9557 4000
- UNIQUE AUTOSPORTS 9620 9000

- Billet alloy RB30 to 4wd adaptor kits $1500
- Ethanol street and race fuel in E85, E90, and E100 blends Ethanol from $2 per litre.
- Platinum street and race cams most performance cars RB26 270 degree drop ins for $425 each
- For information and fitting instructions:

www.platinumracingproducts.com

FF044_07

COOLER CORE CONCERNS

For a start, you are never going to see more than around 140°C on the face of a cooler core. If you do, then the core simply isn't going to do the job and must be upgraded. This means that the amount and style of water injection onto a cooler core must be handled differently.

Forget about big streaming jets of water then and instead look towards a misted solution that atomises the water into fine droplets, which in effect gives the water a far greater surface area, delivering more cooling with less quantity.

One of the biggest issues with cooler cores is that most of their outlets are directly through the back side of the wheel arches. This means that any water you spray directly onto the cooler core (if there is any substantial quantity) may possibly end up coming out the other side of the cooler venting and onto the front wheels, which is something you definitely want to avoid. A careful and considered approach is required then.

MISTING

Rather than using a jet of water, we instead use a fine mist, which is something that can be achieved using a conventional water mist nozzle with a very fine (0.3mm) orifice.

These mist jets will work with the pressure of a conventional windscreen washer pump pushing against them and deliver around 30mL of water per minute when set up this way. Since the water comes out in super-fine droplets, there is little chance of excess water making it through the backside of the core.

Getting the right quantity for our applications (transmission cooler core and oil cooler core) has required that two mist jets are required per core, meaning that a peak water usage of 50mL per minute is attainable.

The trick, though, is to use the water for as little time as you need it to measure a suitable temperature drop and, of course, positive result. This is where testing and control of the system is important, and it's here some nifty techniques can be implemented to make water misting really work.

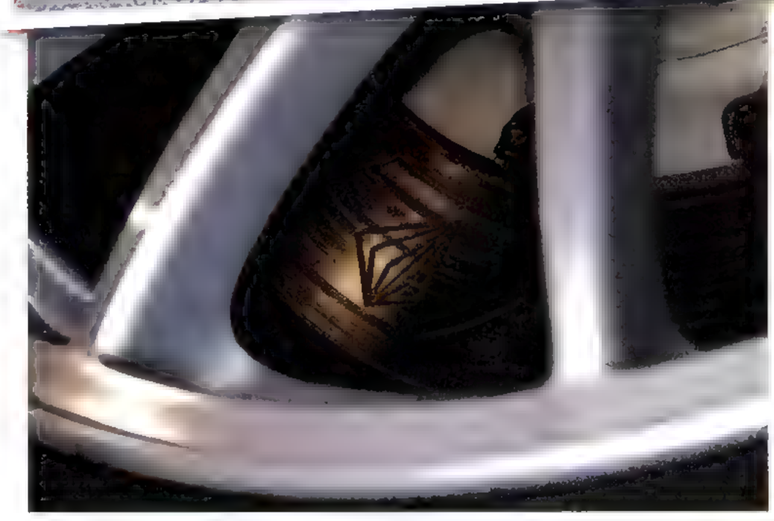
CONTROL

The last thing you want to do is have the misters spray the moment you hit the brake pedal, as that's when you don't need water around the brakes. The best approach then is to put the situation in inverse and trigger the misting system when the brake pedal has been released rather than pushed. Normally this occurs when the nose of the car is being pointed out of a corner and heading towards a straight section of the track.

Keeping the sprayers active then comes down to using a timer relay, which are commonly used in LPG applications with dip switches that can keep the spray system running for an adjustable 5–30sec period. Having a look at our track at Mallala in South Australia, we figure that keeping the mist system active for 20sec after the brake pedal has been released will give about the perfect balance of cooling to water use.

Arming switch for water cooling put where it can be easily reached when in the driving position

We haven't tried this yet, but a multi-nozzle fuel injector could be used to deliver a fine water mist without too many problems



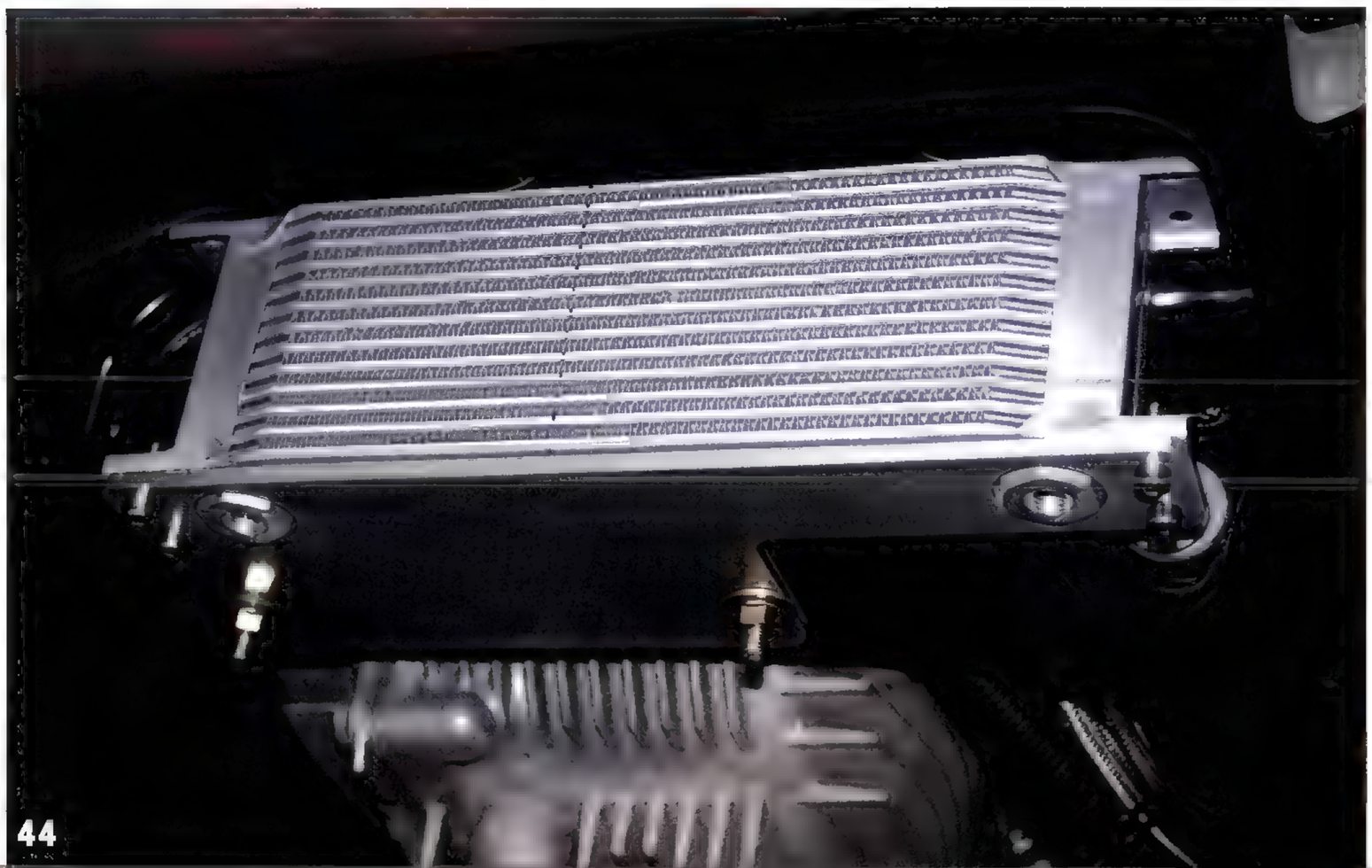
RESULTS

The most amazing thing about using water as a cooling medium is the pure scope of the results that can be measured. Forget about having to look for a one or two-degree drop in temperature, as the results will be there in big achievable readings.

Characteristically, where we would see transmission temperatures at 115°C using a high-quality cooler, they will drop to somewhere around 102–103°C when the misting system is switched to on. The same kind of drops can be measured in the engine oil temperature.

There are all sorts of possibilities for a misting system like this, from the most obvious (being the intercooler system) through to the engine radiator in drift-type applications where many competitors seems to have ever present issues with engine overheating due to the low airflow and frontal speed of the vehicle.

The good news is that this technology is affordable and easy to implement, making the sky the limit when it comes to hardcore cooling control of your next project. «



SUBSCRIPTION OFFERS

OFFER 1
SAVE $39
10 ISSUES FOR ONLY $60.50
Offer Expires 4-03-11

OFFER 2
SAVE $62.55
15 ISSUES FOR ONLY $86.70
Offer Expires 4-03-11

» ROAD TEST: V36 SEDAN + OIL MYTHS BUSTED + INSIDE LINK EMS
PERFORMANCE imports
DRAG RACING @ SENDAI JAPAN
KILLER wasp
1072AWHP MERCURY R34!
+800HP PIT ROAD M GTO
450HP R33 SLEEPER
300HP D-SURF SR R32
100% STREET DRIVEN!
» MSC JAPAN: HOT DRIFT ACTION @ HONJO » NOS MADE EASY
PERFORMANCE imports GT-R
HOW TO BUILD THE ULTIMATE GT-R!
JAPAN'S BEST
830HP REVOLFE 32!
REVOLUTION!
650HP ADMIX R33
420HP R32 STREETER
SAVE A FURTHER 10% OFF
THESE PRICES IF YOU ORDER BEFORE 25-02-11

TAKE ADVANTAGE OF THIS OFFER NOW!

FREE POST	FREECALL	FAX	EMAIL
Express Publications Reply Paid 60698 Silverwater NSW 1811	1800 801 647	(02) 9737 8017	subs@magstore.com.au

Please select your preferred Offer & appropriate Price.		Offer code	Offer	(a)	Discounted Price	(b)	Discounted Price Less 10%
☐	Offer 1.	HP200	10 issues of ***Performance Imports***	☐	*$60.50 (SAVE $39.00)*	☐	*$54.45 (SAVE $45.05)*
☐	Offer 2.	HP201	15 issues of ***Performance Imports***	☐	*$86.70 (SAVE $62.55)*	☐	*$78.03 (SAVE $71.22)*

(NOTE: Additional 10% is ONLY available to those who are ordering on or before February 25, 2011.

(PLEASE COMPLETE IN BLOCK LETTERS) *Denotes mandatory field

Name*: Mr/Mrs/Ms/Miss

Address*:

Suburb*: State*: Postcode*:

Daytime Contact No.*: Phone (H)*: Phone (W):

Email:

EASY PAYMENT OPTIONS

1. Please debit my: ☐ Visa ☐ MasterCard ☐ Amex ☐ Diners

Card Number: ☐☐☐☐ / ☐☐☐☐ / ☐☐☐☐ / ☐☐☐☐

Expiry Date: ☐☐ / ☐☐

Name on Card: Signature:

2. Cheque/Money order for $ is enclosed payable to Express Publications Pty Ltd ABN 96 057 807 904

Offer expires **March 4, 2011**. Prices include GST. Subscriptions will commence with the first available issue. Existing subscriptions will simply be extended. If your order is cancelled before all issues are received, payment will be pro-rated over the total number of issues available as part of the offer for the purpose of calculating any refund due. All cancelled subscription orders will incur a $20 Administration Fee for the processing of refunds. **PLEASE NOTE:** Free gifts are usually dispatched immediately and arrive separate to the magazine subscription, however please allow up to 6 - 8 weeks for delivery depending on location. Offer/s open to Australian residents only. OS residents will incur additional postage costs based on postage rates issued by Australia Post.

Stealth Freak

A GTS-t in GT-R skin with a 455rwhp RB30/26 that looks stock? Cliché killer here we come

Words: Jason Round Pics: Eric Tang

The R33's still running the viscous diff, so a 1.5-way has been moved up the Chrissy list

I LOVE THE CURVES OF THE GT-R, BUT I'M MUCH HAPPIER IN A RWD VEHICLE

"Like any good relationship, it all started with a little head," says 32-year-old Matt, the owner of this GTS-t gone Godzilla. You see, he bought the head long before he bought the car and started preparing it for what he wanted. The ports were tidied, new guides and heavy-duty springs in, until it sat wrapped in plastic for a couple of years while Matt's VL Turbo was out to play. Then the R33 showed up...

In its former guise, the R33 was a bogger, slusher 1993 GTS-t in a very dull gunmetal grey. It was, however, in excellent condition and only purchased with the end goal in mind, as Matt puts it. In fact, he hardly even drove the thing before starting the build.

He also had a very clear idea of what he wanted from the build. He told us, "I wanted a quick, street-oriented vehicle that wouldn't get defected every time I drove it and could handle a day at the track with no worries. I'm a rear-wheel-drive kind of person and enjoy a car that doesn't drive itself. It also had to be able to pull up at the servo and fill up with PULP."

The first thing you'll notice is the complete GT-R body conversion, and yes, those are all genuine Nissan panels, including the quarters. It was a "big job", says Matt, but all worth it when you see the final bare-metal respray in Winning Blue. And the best part? Unlike so many posers poisoning the streets of our fair cities, there's not a GT-R badge in sight.

Also out of the norm are 18x10in +14 Sparco Viper R rims that, funnily enough, weigh less than a stock 16in rim. The Tein coil-overs, too, have been built for Australian conditions and suffer none of that tooth-through-skull action you get from those imported direct from Japan.

Matt's also built the car himself where possible, though didn't pull the trigger on the gun nor take care of the quarters, leaving that up to the pros.

With the GT-R coat on, it wouldn't have been right to leave the RB25 in place, which is why it was promptly replaced with a built RB30/26. The auto was dumped and in went a RB25DET box with NPC twin-plate for what should be a bulletproof tranny for future power push-ups.

Matt sourced an RB30, stripped it down and binned all but the crank. Then, once he got into the RB25DET manual conversion, things started spiralling. "I purchased a lot of quality parts as I could afford them, and once I had what I needed, I started to put it together."

It has the works, too: 8.5:1 CP pistons, torque-plate bore, balanced, nitrided, ported head, Argo rods, ATI damper, Autronic SM4... That which couldn't be bought off the shelf Matt worked up personally, including the sump extension, designed to take around 6.5L including baffles and a single trapdoor.

The grinding and balancing were completed by Crankshaft Engineering at Browns Plain, boring done by Jack Bros at Slacks Creek, but Matt did all assembly himself – parts strewn like toddler toys throughout the house.

The idea was to develop a set-up with more power than traction, built for reliability and efficiency. If it could handle 800hp, thought Matt, then it would be able to cope with 500hp or more safely for a lot longer. If that isn't enough, it's only a turbo swap away from stupid power.

The low-mount adds to the sleeper nature of the install. It's a GT35/40 with 0.82 exhaust running a 48mm Pro-Gate with very little in the way of lag. Matt fabricated the manifold and exhaust system himself, having a mate CAD draw all the flanges to be laser cut-, match-ported flanges. There was plenty of die-grinder time inside the collector as well to ensure they were as perfect as could be.

Matt told us, "I bolted it all together myself, as when investing as much on the motor as I have, I wanted to know it was done right. I enjoyed the satisfaction of creating it. The same goes for the exhaust and manifold. I know there are no restrictions and that all the merges are spot-on."

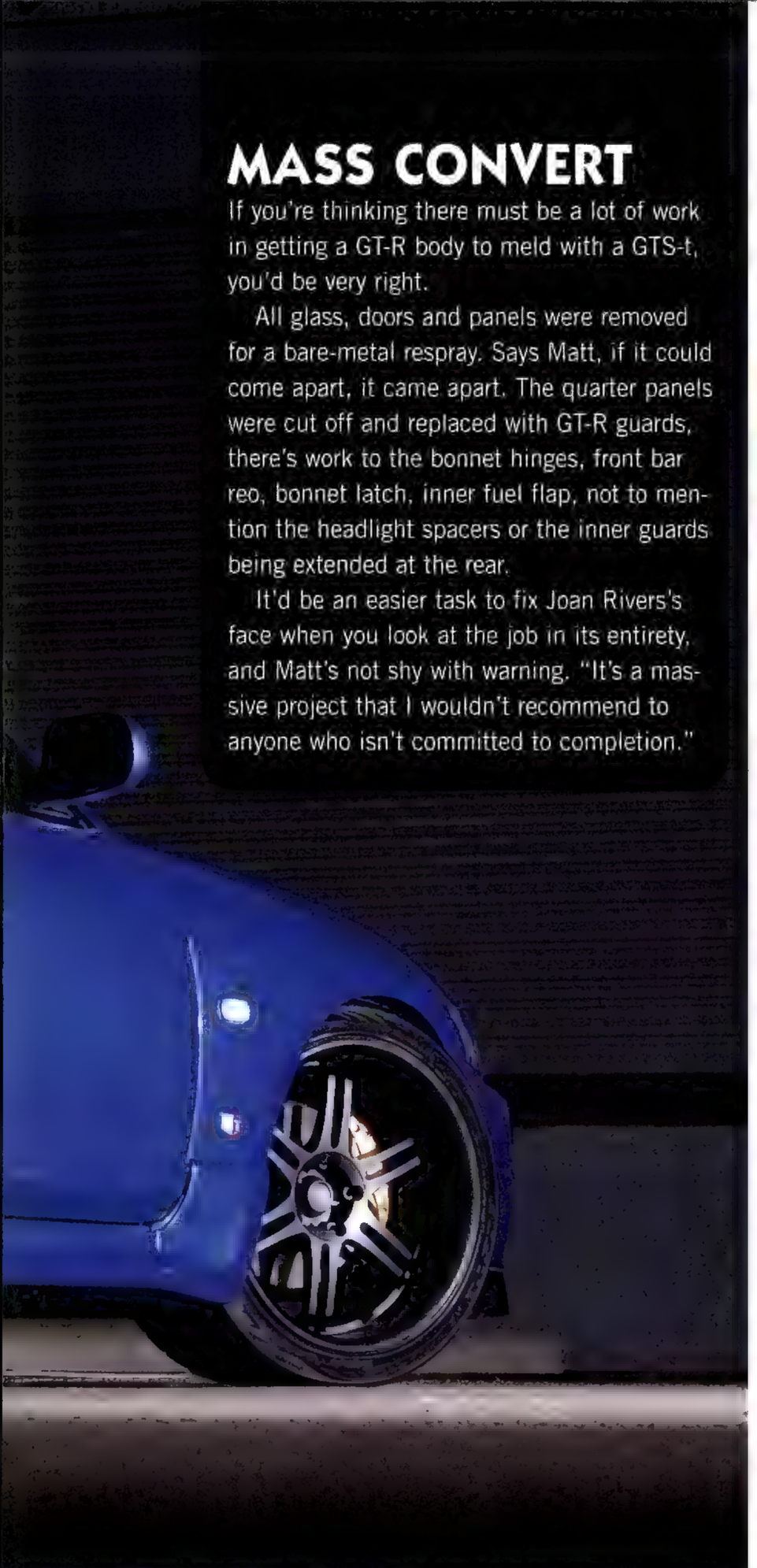
Matt also wired the Autronic, nutting through the fiddly bits and finally firing it up 7pm on a Sunday night with just the dump pipe off the turbo, cranking it over and having the missus move the CAS until it came to life. "I'm sure my neighbours hated me that night as I sat and enjoyed the magic noise I was creating," he laughs.

MASS CONVERT

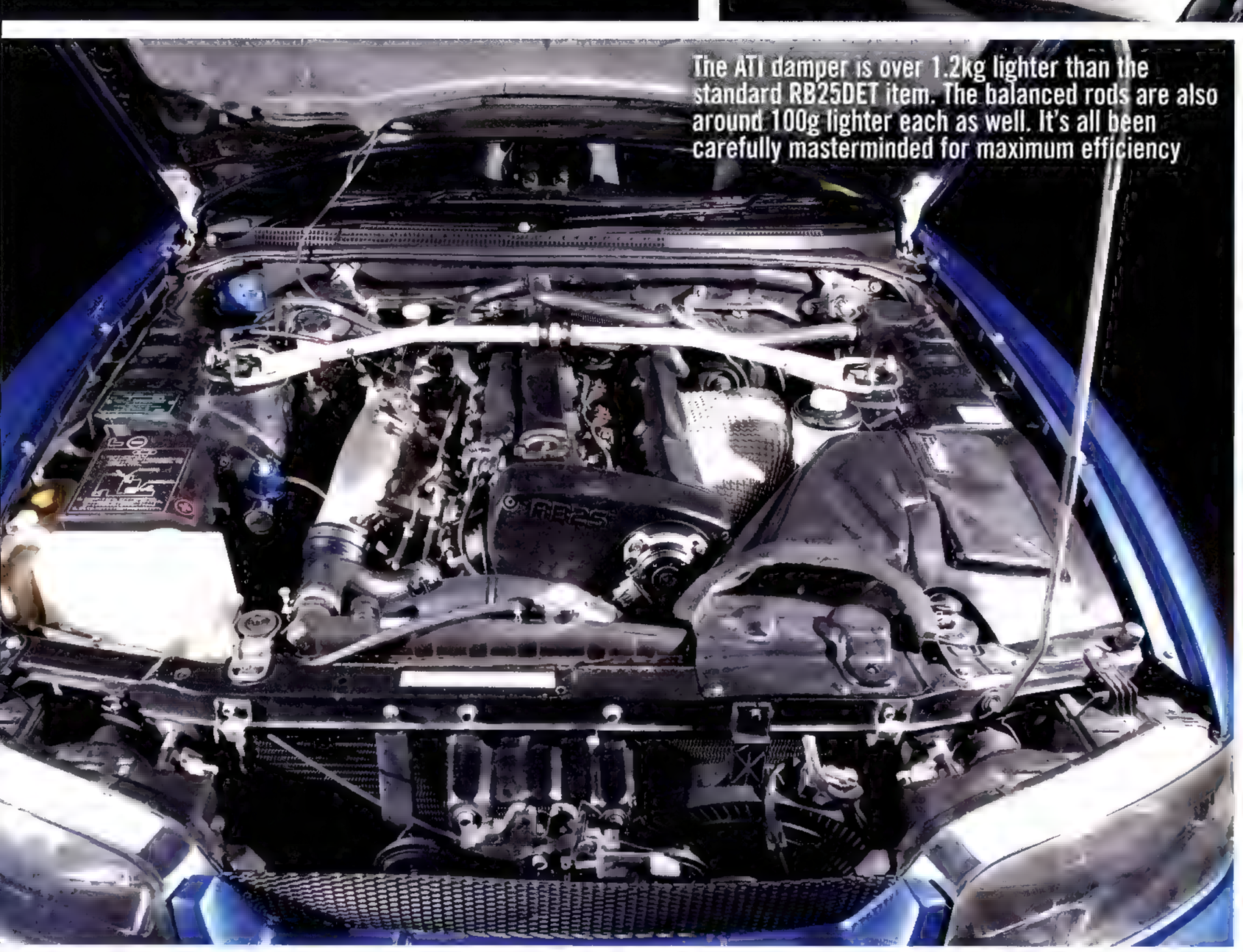
If you're thinking there must be a lot of work in getting a GT-R body to meld with a GTS-t, you'd be very right.

All glass, doors and panels were removed for a bare-metal respray. Says Matt, if it could come apart, it came apart. The quarter panels were cut off and replaced with GT-R guards, there's work to the bonnet hinges, front bar reo, bonnet latch, inner fuel flap, not to mention the headlight spacers or the inner guards being extended at the rear.

It'd be an easier task to fix Joan Rivers's face when you look at the job in its entirety, and Matt's not shy with warning. "It's a massive project that I wouldn't recommend to anyone who isn't committed to completion."



Matt says he wasn't "shopping from the Sparco catalogue" when it came to the interior. "It just happened that way," and all for the better



The ATI damper is over 1.2kg lighter than the standard RB25DET item. The balanced rods are also around 100g lighter each as well. It's all been carefully masterminded for maximum efficiency

Together, these wheels and tyres weigh less than the standard 16in GTS-t items

Tuned at Skyline specialist GT Auto Garage in Brisbane, the combo developed 455rwhp at a lowly 17psi on pump.

The best thing is it looks completely stock. Nothing is chromed, nor polished. There's just plenty of matte black, a stealthy heat-shield and the K&N hiding behind what remains of the factory airbox. Stealth is indeed the word.

Matt hasn't had a chance to take the car to the circuit yet, but has had one outing at Willowbank last year for the R33's virgin run. Driven to the track, with a "crap, lazy launch" and large amounts of wheelspin, it still managed a 12.79@118mph. Says Matt, "The second and third runs saw even larger amounts of wheelspin until mid-13s. The fourth run I broke a driveshaft... and started the long mission home." But he backs it all up with sense, stating, "I'm sure with a little practice and some decent sticky tyres times could drop, but I don't overly care about times. I just enjoy having a nice, quick, traction-challenged car."

In hindsight then, you may be asking 'why?'. "I love the curves of the GT-R," Matt continues, "but I'm much happier in a RWD vehicle." There has been a renovated house in way and a wedding in-between, but it's all come together in the end.

Unlike some stories you'll see in this publication, there's no list of thanks to rival the Dead Sea scrolls either, and that's largely because the car's seen no workshops; just dyno tuning. Matt's wife, however, does have to be given a pat on the back for putting up with him and all the engine parts that called the kitchen table home. That might all be a thing of the past, though...

Says Matt, "Over the years my priorities have changed. If someone offers the right cash I'll let it go and build a dedicated track car. If I keep it, a decent LSD and suspension mods will be next to enjoy those twisty roads a little more and the occasional track day." Interested? Send us an email at PI and we'll pass on your details.

If, however, you're considering rolling a low-ball at him, just realise what a car like this cost to build plus countless hours covered in vehicular fluids. At the risk of divorce, however, we'll have to leave it up to your imagination... «

I DON'T OVERLY CARE ABOUT TIMES. I JUST ENJOY HAVING A NICE, QUICK, TRACTION-CHALLENGED CAR

VITALS

ENGINE: 3L RB30/26 six-cylinder turbo
POWER: 338rwkW
POWER FROM FACTORY: 206kW
POWER TO WEIGHT: 0.23kW/kg

» ENGINE HARDWARE

Block torque-plate bored, ARP2000 head and main studs, RB25DET oil pump, custom baffled 6.5L sump including trapdoor, 1mm oil gallery restrictors, dash fittings, N1 water pump, RB30 ground, grub-screwed, extended crank collar, balanced and nitrided, ATI damper, balanced Argo I-beam 21mm pin rods, ACL Race-series bearings, balanced 20thou'-over CP forged pistons and rings, head ported, performance springs, Garrett GT35/40 turbocharger (0.82 housing, low-mounted, modified compressor cover to fit plumbing), Turbosmart 48mm Pro-Gate, match-ported custom extractor-style steam-pipe manifold with ACL heat shield, matte black 4in alloy bends for intake, 9in-long K&N filter semi-boxed and hidden, cold-air feed from front bar, Cooling Pro GT-R replacement front-mount tube-and-fin intercooler (70mm thick), 2.75in piping from turbo to 'cooler, 3in piping from 'cooler to plenum, silicone hose joiners, in-tank Bosch 044 fuel pump, Turbosmart FPR, 700cc Denso injectors, Autronic SM4 and trigger disc in CAS, 3in mild-steel mandrel-bent exhaust system with Super Cat 3in stainless cannon

» DRIVETRAIN

RB25DET gearbox, NPC twin-plate with integrated flywheel

» BRAKES/SUSPENSION

Ferodo DS2500 brake pads, Tein Australian-spec adjustable coil-overs, GT-R front and rear strut braces

» WHEELS/TYRES

18x10in +14 Sparco Viper R wheels, 245/40 stretched front and 275/35 rear Kumho KU36 semi-slicks

» BODYWORK

Genuine GT-R front bar, guards, lip, rear bar, side skirts, bonnet and spoiler, alloy front splitter, Standox 2K Mazda Winning Blue respray, headlight spacers, inner guards extended rear

» INTERIOR

Sparco Torino II front seats, rear seats re-trimmed in Sparco fabric to match, Sparco dish steering wheel, short-shifter with custom gearknob, Innovative wide-band A/F gauge, Auto Meter mechanical boost and oil gauges, Trust turbo timer, Series II dash surround, Alpine stereo, JL sub

HKS

Service Package

Includes - 5Lt of HKS 10W45 Super Racing Engine Oil & 1 X HKS Hybrid Oil Filter.

$120

GT AUTO GARAGE

Driving your Performance

GT Auto Garage – 5/150 Edmondstone St. Newmarket QLD 4051
Ph: (07) 3356 9401 – (07) 3356 9402 **Fax:** (07) 3356 9416
Email: info@gtautogarage.com.au **Blog:** http://gtmotorgroup.blogspot.com/
www.gtautogarage.com.au

HP1191_01

SPOOL CONRODS AND CRANKSHAFTS

PH: 0402 351 688 **FAX:** (07) 3112 3963
EMAIL: sales@spoolimports.com

SPOOL FORGED 4340 H & I BEAM CONRODS:
SPOOL CONNECTING RODS ARE TRIED AND TESTED HIGH PERFORMANCE. CONNECTING RODS FOR TUFF STREET / DRAG ENGINE APPLICATIONS.

FEATURING:
- 2 PIECE CHROMEMOLY FORGING
- DOWELED CAPS
- X RAY & SONIC TREATED
- HEAT TREATED AND SHOT PEENED
- ARP 2000 CAP SCREWS

NOW AVAILABLE FOR:
NISSAN: CA18, FJ20, SR20, RB20, RB25/26, RB30, L28, VQ35
TOYOTA: HILUX 3RZ, 4AGE, 2JZ, 1JZ, 5K
SUBARU: EJ18/20/22/25
FORD: BA XR6 TURBO, EL & EF
ISUZU/HOLDEN: 4ZE1, G180, G200
MAZDA: BP18T
MITSUBISHI: 4G63, 4G93, 3000GT
HOLDEN: 202, VN COMMODORE, ECO TECH COMMODORE

BILLET STROKER CRANKSHAFTS AVAILABLE FOR
- 2JZ
- CA18
- SR20
- RB25 / RB26
- RB30

- WHOLESALE ENQUIRIES WELCOME

CHECK WEBSITE FOR MORE INFORMATION – RANGE UPDATED REGULARLY

WWW.SPOOLIMPORTS.COM

Pit Fighter

See the tuner unloved in a new light with the 800hp Pit Road M GTO

Words and pics: Dino Dalle Carbonare

To us, Pit Road M is famous for two things – crazy GTOs and crazy K-cars

Z11A

ROAD M

O5搭載車

RIST

OPTION2

Out of all the Japanese turbocharged performance cars of the '90s, the GTO was the black sheep, loved by a few, but mostly ignored by tuning shops and enthusiasts alike. This is precisely why Morishita-san at Pit Road M chose this platform to show the world what his shop was capable of.

Located in the countryside just outside the city of Himeji in Hyogo prefecture, Pit Road M is well known for tuning a wide variety of cars, but particularly for extracting power from the most unlikely vehicles, most notably its 200hp-plus kei cars.

The GTO, however, is their most prized creation, a car that has taken years to finetune and one that keeps impressing for its performance out on track. With the car resembling something out of a Gundam manga, we just had to head there to see it with our own eyes.

Ever wondered what a car would look like if one were to modify every single part it was made up from? Well, we think it would resemble something like this GTO. There is absolutely nothing that hasn't been upgraded, tuned, fabricated or altered, and the result is something that perfectly embodies just how far Kansai-style tuning can go.

As we have seen in the past, people like to do things quite differently down in the south, and Morishita didn't exactly hold back when the time came to give his Z11A the ultimate time-attack look.

Taking centre stage up front is the Pit Road M bumper cut and modified to allow the massive intercooler and side-mounted oil coolers to breathe. In fact, so much has been cut out of the corners where the oil coolers are that only two thin strips of FRP remain.

Industrial-looking orange piping pops out low onto the front carbon diffuser, there to help channel air to the front brakes. The passenger side headlight has been removed, in its place a carbon-fibre cover with a pair of circular intakes to help feed cool air towards the intakes. Carbon-fibre is the order of the day with the front aero bonnet, the multitude of canards on the front bumper, the wider front and rear fenders and even the doors made of the lightweight material.

Morishita cut up the rear Pit Road M bumper samurai-style, slicing up the centre section and creating eight square outlets that help extract air from under the car. A very low carbon diffuser and huge carbon GT wing are there to keep the rear end planted on track and to balance the high down-force created by the long splitter up front.

Bulbous side skirts and carbon mirrors complete the impressively long list of aesthetic modifications, which are topped off with an impossibly Japanese set of graphics. Wheels of choice are 18x9.5in bronze TE37s fitted with 285/30 Yokohama Advan Neova AD08 at each corner to get the most out of the tremendous power the engine develops.

Lifting the impressively light carbon bonnet will reveal yet another surprising aspect of this Pit Road M GTO – the highly tuned, and very shiny, 6G72. As Morishita tells us, the awkward transverse positioning of the 3L twin-turbo V6 caused a lot of headaches when trying to get all of the parts to fit, calling for a lot of ingenuity and custom fabrication to get right.

To strengthen the bottom end up, ready for some heavy doses of boost, Morishita fitted special Pit Road

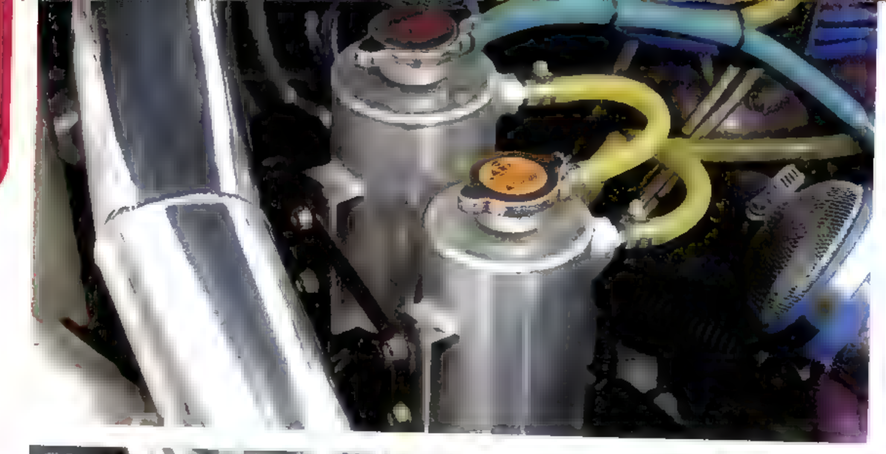
To help the valves stay open longer and lift higher, a set of 294° cams was thrown in along with higher quality valvesprings

M developed H-section connecting rods and forged pistons along to the balanced factory crank. The heads were removed and polished, with all intake and exhaust ports slightly enlarged to flow a greater volume of air more efficiently.

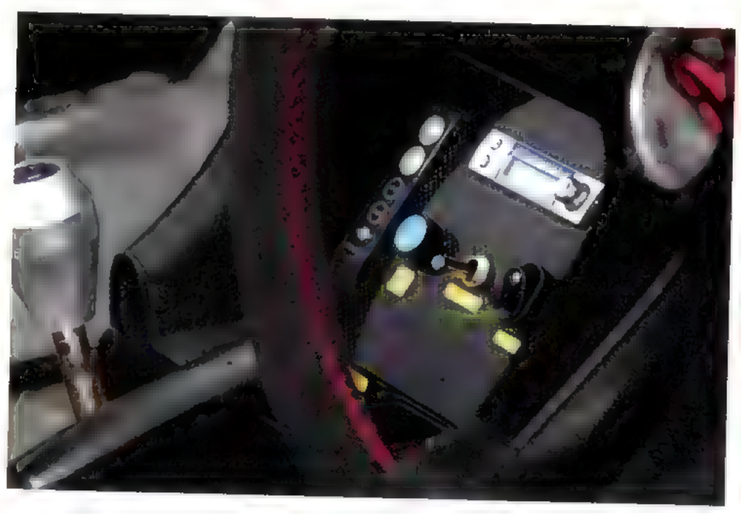
The heads were sealed onto the block along with a pair of 1.5mm thick metal head gaskets, which help lower the compression ratio to balance the savage force-feeding supplied by the two Trust TD05 blowers. These are mounted on Pit Road M stainless steel manifolds along with a pair of Trust Type II wastegates, while the one-off big bore front pipes channel spent gasses away to the titanium exhaust system.

The TD05 breathes through a pair of one-off intake pipes with no type of filtering aside from small metal grilles. Due to the transverse position of the 6G72, a lot of custom piping had to be made to plumb everything in place, which includes a complex intake plenum fed by a 90mm Infiniti Q45 throttle.

Satisfying the thirst of the V6 are six 1000cc/min injectors fed by a pair of modified Nismo GT-R fuel



Easy access to the Nos bottle was paramount if ever the need arises to shut it off in a hurry



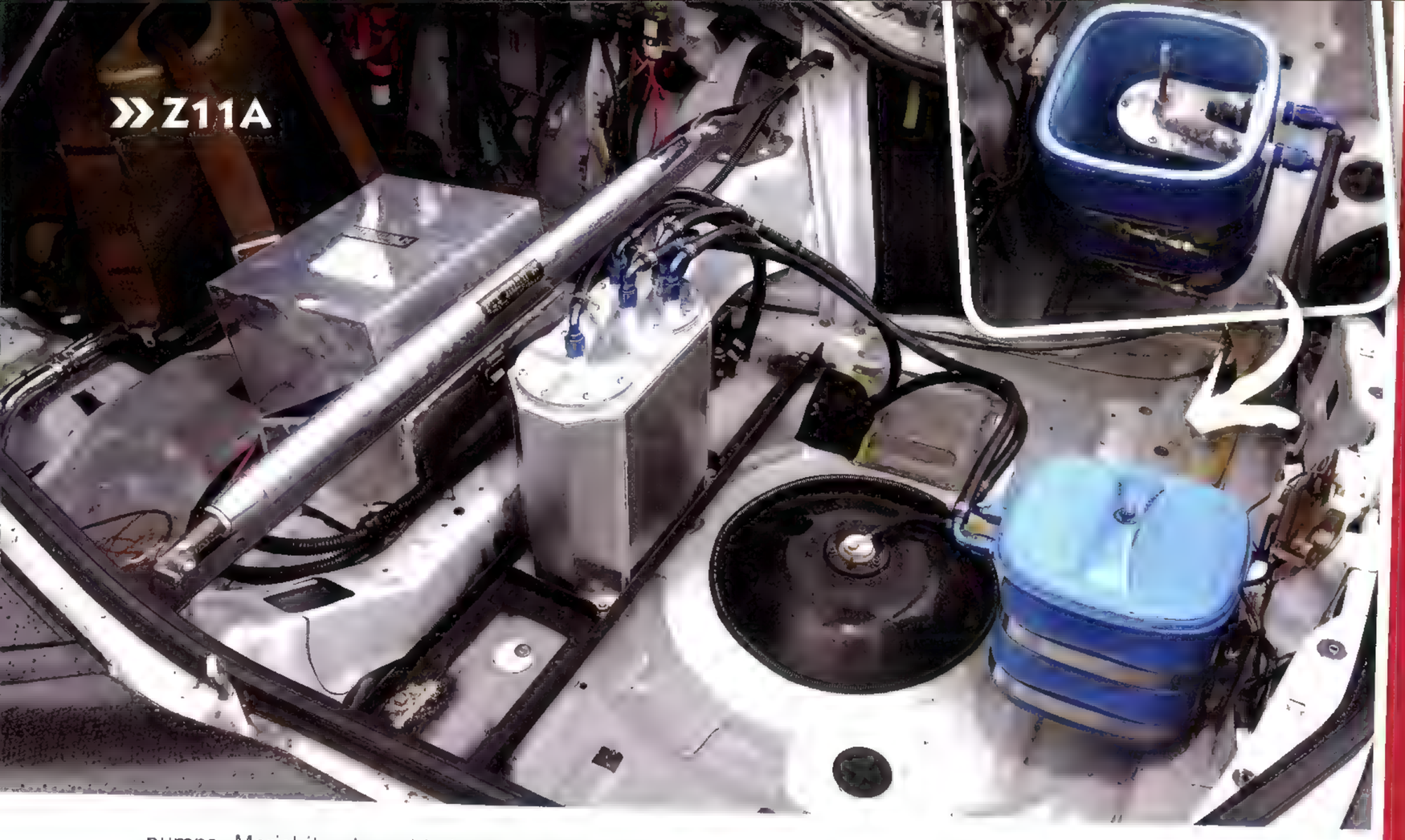
JUST OVER 800HP IS DEVELOPED WITH A TOWERING TORQUE CURVE THAT PEAKS AT JUST UNDER 92KG/M

LAUNCH CONTROL

Compared to the rest of the car, the interior has been kept rather uncluttered, with a single Recaro SP-GIII bucket seat fitted into the otherwise bare shell. The passenger seat is replaced by the nitrous-oxide tank, within easy reach if the tap needs to be closed in case of accident.

The stock dash and instruments remain joined by a series of Defi gauges recessed into the passenger side of the dashboard, with the boost gauge fitted onto the A-pillar. A neat carbon console was created to house the GReddy Profec B boost controller and the switches for the nitrous-oxide system, which, once warmed up, purged and activated, can be injected into the engine by pressing the red button on the Nardi steering wheel.

At the rear, the heavy rear gate has been binned and replaced with a carbon item, which like on the doors, is fitted with a light acrylic window



pumps. Morishita also added a fuel cooler next to the custom collector tank. The final piece of the puzzle is the nitrous-oxide system, used as an additional boost of power for those tricky overtaking manoeuvres.

With the HKS F-Con V Pro at the reins, and running 2kg/cm² of boost, just over 800hp is developed with a towering torque curve that peaks at just under 92kg/m! These numbers are achieved with the nitrous oxide system on.

To help dose power to the stock six-speed Getrag transmission, a triple-plate ATS carbon clutch was chosen for its smoother and more forgiving nature, while a much stronger carbon propeller shaft helps reduce rotational masses. Pit Road M-developed front and rear limited-slip differentials are a must to efficiently distribute that towering torque to the four driven wheels.

Morishita does all of the driving with the GTO, so the suspension set-up is one that he has finely tuned over the years. Pit Road M Circuit Pro Type-III adjustable suspension is used, specially built by Aragosta, to help get the most out of the grip available. Arms are mostly stock with the exception of the rear top arms, there to add a little more negative camber. Pit Road M front and rear strut-tower bars help, like the half roll-cage, stiffen the chassis.

Some 800 horses are obviously a lot to handle for the braking system, which is why AP Racing calipers are fitted all round, six-pots with massive 380mm discs at the front and smaller four-pots with 332mm discs at the rear.

Morishita tells us the car is quite an animal out on track, but has so much traction and grip that it's actually very easy to drive. Just don't hit that Nos button mid-corner! «

VITALS

ENGINE: 3L 6G72 six-cylinder twin-turbo
POWER: 803.7hp
POWER FROM FACTORY: 280hp
POWER TO WEIGHT: 0.28kW/kg

» ENGINE HARDWARE

Pit Road M forged pistons, H-section connecting rods, 1.5mm metal head gaskets, ported and polished heads, valvesprings, Type-II camshafts [294° duration (IN/EX), 9.9m lift (IN), 9.24mm lift (EX)], cam pulleys and exhaust manifolds, two Trust TD05-SH 18G turbochargers and two Type S external wastegates, Pit Road M 80mm front pipes, straight-through cat-replacement pipes, 90mm titanium exhaust system with 115 exits and custom intake pipes (filter-less), HKS Type R triple-row intercooler, Pit Road M custom aluminium piping, Infiniti 90mm throttlebody, Pit Road M custom intake manifold, two Nismo GT-R in-tank fuel pumps, Pit Road M fuel pump power-up system and collector tank, fuel cooler system, Sard FPR, six Pit Road M 1000cc/min injectors, GReddy nitrous-oxide system, Pit Road M racing radiator, Samco hoses, Pit Road M low-temp thermostat and air-separator tanks, two HKS oil coolers, Ultra ignition cables, Pit Road M one-off oil catch tank, polished head covers, Pit Road M engine damper, HKS F-Con V Pro Ver 3.3

» DRIVETRAIN

ATS triple-plate carbon clutch, Pit Road M two-piece carbon propeller shaft, Pit Road M GTO special front and rear LSDs

» BRAKES/SUSPENSION

AP Racing six-pots and 380mm two-piece rotors front, AP Racing four-pots and 332 two-piece rotors rear, Pit Road M Circuit Pro Type-III adjustable suspension, rear adjustable camber arms and front and rear strut-tower bars

» WHEELS/TYRES

18x9.5in +12 Rays Engineering Volk Racing TE37 wheels, 285/30 Yokohama Advan Neova AD08 tyres

» BODYWORK

All Pit Road M Falcon front bumper, front canards, one-off carbon front diffuser, carbon front bonnet, front carbon wide fenders, Falcon carbon doors, Falcon side skirts, Falcon carbon rear wide fenders, Falcon carbon rear gate, Falcon rear bumper, carbon rear diffuser, carbon diffuser fins, 3D carbon GT wing, Falcon carbon side mirrors, Falcon carbon headlight intake, acrylic windows, LED tail-lights

» INTERIOR

Pit Road M half roll-cage and floor brace, Recaro SP-GIII bucket seat, Pit Road M six-point harness, Nardi racing steering wheel, Pit Road M shift knob, Auto Gauge A/F meter, Defi gauges (boost, water temp, oil temp, oil press, exhaust temp), Defi Control Unit II, HKS Circuit Attack Counter, GReddy Profec B spec II boost controller, carbon centre console, relocated battery, nitrous-oxide tank

ジャパニーズ
インポートスペアーズ
6666 Customs GT Rodeo Special
IDEMITSU
Four Six Customs
BRIDE
BRIDE
HOLDING MONSTER
kazama
www.kazamaauto.co.jp
WWW.JAPENESEIMPORTSPARES.COM.AU
2 Sleaford Road Windsor Gardens SA, 5087 | Ph 08 8266 0212 | Fax 08 8266 0242

PERFORMANCE

imports

WWW.HP1.COM.AU

MERCURY
MOTORSPORT

GT
R
QLD
NITTO
www.JustJap.com

IMPORT MONSTER

YAHOO AUCTIONS PURCHASING SERVICE

- REAL TIME BIDDING – BID LIVE, 24/7
- CONTAINER FREIGHT SERVICE TO AUSTRALIA
- DELIVERY GUARANTEE!

AUSTRALIAN SHOP

- 50+ SETS OF NEW AND USED RIMS WORK, VOLK, ADVAN ETC
- LARGE RANGE OF NEW AND USED PARTS FOR JAPANESE CARS
- SHIPPING AUSTRALIA WIDE!

CAR IMPORTING

- SAVE MONEY BY GETTING YOUR NEXT CAR DIRECT FROM JAPAN
- DEDICATED, PROFESSIONAL SERVICE
- MANY YEARS OF EXPERIENCE = PEACE OF MIND!

IMPORT MONSTER

3/6 WIGAN ROAD
BAYSWATER VIC 3153

03 9008 0031

IMPORTMONSTER.COM.AU

SUBSCRIPTION OFFERS

A MUST FOR ALL FAST FOUR AND ROTARIES FANS!

From the old school roots of modifying Datsun's and RX3's through to the high tech turbo charged monsters of today. Whether you're looking for the latest event coverage, the most informative tech features or just a decent DIY, Fast Fours and Rotaries is Australia's home of Modified Four cylinder and Rotaries.

OFFER 1
SAVE $39
10 ISSUES FOR ONLY $60.50
Offer Expires 4-03-11

OFFER 2
SAVE $62.55
15 ISSUES FOR ONLY $86.70
Offer Expires 4-03-11

SAVE A FURTHER 10% OFF THESE PRICES IF YOU ORDER BEFORE 25-02-11

TAKE ADVANTAGE OF THIS OFFER NOW!

FREE POST	FREECALL	FAX	EMAIL
Express Publications Reply Paid 60698 Silverwater NSW 1811	1800 801 647	(02) 9737 8017	subs@magstore.com.au

Please select your preferred Offer & appropriate Price.		Offer code	Offer	(a)	Discounted Price	(b)	Discounted Price Less 10%
☐	Offer 1.	HP204	10 issues of ***Fast Fours***	☐	*$60.50* ***(SAVE $39.00)***	☐	*$54.45* ***(SAVE $45.05)***
☐	Offer 2.	HP205	15 issues of ***Fast Fours***	☐	*$86.70* ***(SAVE $62.55)***	☐	*$78.03* ***(SAVE $71.22)***

(NOTE: Additional 10% is ONLY available to those who are ordering on or before February 25, 2011.

(PLEASE COMPLETE IN BLOCK LETTERS) *Denotes mandatory field

Name*: Mr/Mrs/Ms/Miss

Address*:

Suburb*: State*: Postcode*:

Daytime Contact No.*: Phone (H)*: Phone (W):

Email:

EASY PAYMENT OPTIONS

1. Please debit my: ☐ Visa ☐ MasterCard ☐ Amex ☐ Diners

Card Number: ☐☐☐☐ / ☐☐☐☐ / ☐☐☐☐ / ☐☐☐☐

Expiry Date: ☐☐ / ☐☐

Name on Card: Signature:

2. Cheque/Money order for $ is enclosed payable to Express Publications Pty Ltd ABN 96 057 807 904

Offer expires **March 4, 2011.** Prices include GST. Subscriptions will commence with the first available issue. Existing subscriptions will simply be extended. If your order is cancelled before all issues are received, payment will be pro-rated over the total number of issues available as part of the offer for the purpose of calculating any refund due. All cancelled subscription orders will incur a $20 Administration Fee for the processing of refunds. **PLEASE NOTE:** Free gifts are usually dispatched immediately and arrive separate to the magazine subscription, however please allow up to 6 - 8 weeks for delivery depending on location. Offer/s open to Australian residents only. OS residents will incur additional postage costs based on postage rates issued by Australia Post.

Get A Grip

We break down suspension basics to get you handling better than ever

Words: Martin Donnon, Ryan Lewis and Phil Huynh

We see a lot of random replacement of suspension parts in our day-to-day work on Performance Imports. Rather than have a set plan in mind, changing suspension components to achieve a desired end result, the focus is more often on changing simply for the sake of change.

With this in mind, we will take a single vehicle, the R32 GT-R (which handily enough has suspension design that transfers through to R33 and R34 models) and have a look at the effect of changing different components. A common platform, and with plenty of different options when it comes to modifying the suspension, there are plenty of ways to go forward and backwards when it comes to the GT-R chassis.

Low on budget? Matched springs, like these Teins, and shocks are the way to go

BUDGET-CONSCIOUS

So, all you have is $1500. What do you tackle?

What you're looking to get is a good set of replacement shock absorbers and some lowering springs. But there is more to a well-sorted car than just upgraded struts and springs.

Most of our cars are 10 years old, and in a lot of cases 15 years and older. To get the best handling out of a car this age, you need to ensure that all worn-out bushes are replaced and that spent ball-joints are swapped out. Because this is the budget section, simply have your car inspected by a professional and replace only the parts that are shot to bits.

Dennis from Racing Logic says, "For this kind of money, a new set of shocks and springs is the way to go. Don't feel like you need to spend big on springs from international suppliers. Honestly, King Springs are good quality, and what's more, they're Australian."

Springs: $400 approx
Shocks: $600 approx
Bushes: $300 approx
Ball-joints: $100 approx
Alignment: $60 approx

TOTAL: $1460 APPROX

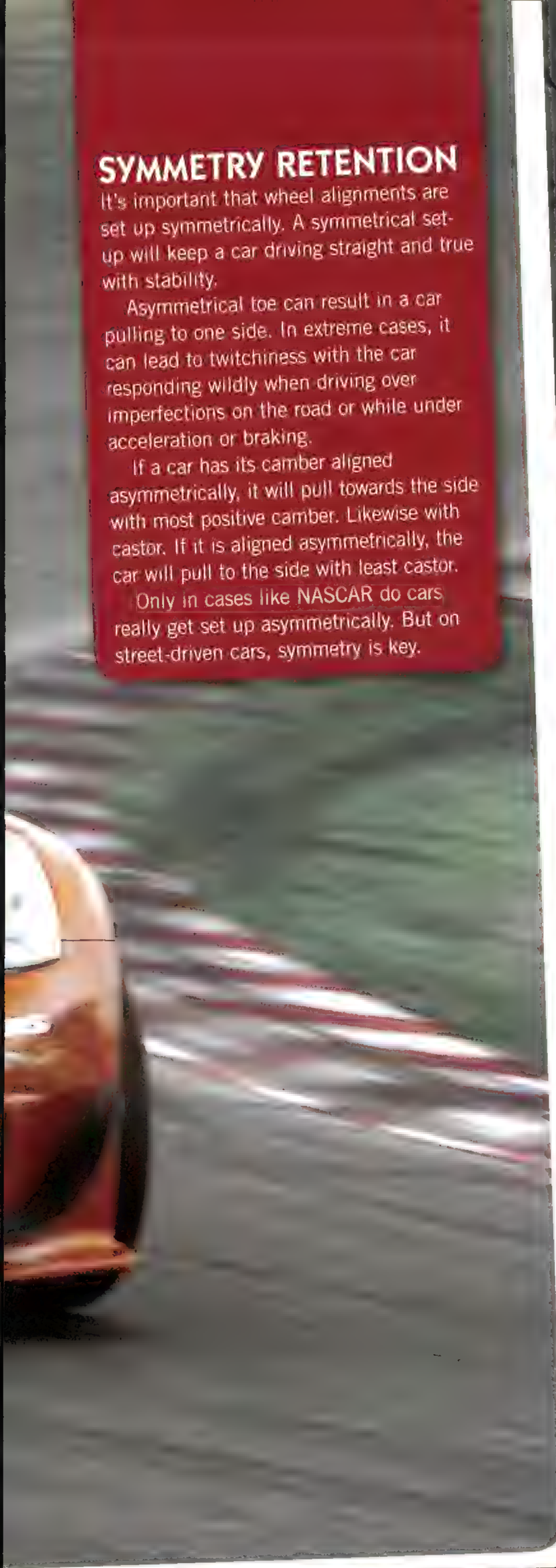
SYMMETRY RETENTION

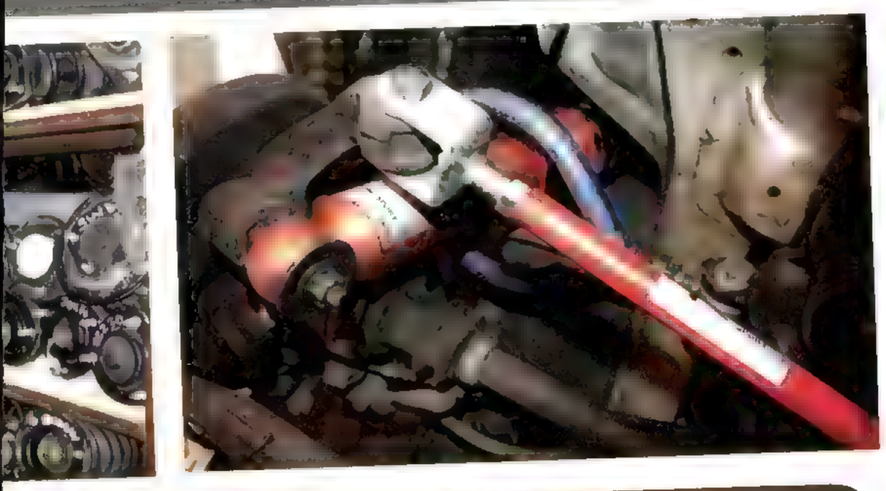
It's important that wheel alignments are set up symmetrically. A symmetrical set-up will keep a car driving straight and true with stability.

Asymmetrical toe can result in a car pulling to one side. In extreme cases, it can lead to twitchiness with the car responding wildly when driving over imperfections on the road or while under acceleration or braking.

If a car has its camber aligned asymmetrically, it will pull towards the side with most positive camber. Likewise with castor. If it is aligned asymmetrically, the car will pull to the side with least castor.

Only in cases like NASCAR do cars really get set up asymmetrically. But on street-driven cars, symmetry is key.





Getting the spring and shock matched correctly is critical, as seen here on our project R35

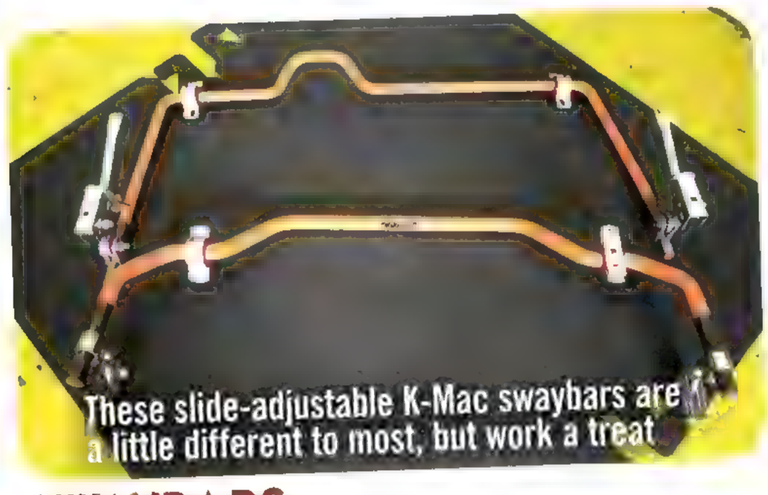
THE SHOCK AND SPRING

Picking the right shock absorber and spring is the simplest and most complex part of modifying the GT-R. There are a myriad of different selections, and to get the right one you need to understand your application fully. A set of coil-over shocker units that works on the race track will not be nice things on the road. Conversely, circuit specification suspension isn't happy at the drag strip, nor the hill-climb course.

The biggest error here is specifying a spring rate that is too soft for the application. Keep the wheels square to the ground at all times for the best possible drive and stop the GT-R leaning too heavily on its outside front tyre (a rule that applies to most all tracked cars) for best results.

On high-speed corners as found on many Australian tracks, this will require a stiffer spring than you might think and in turn need a beefier shock absorber to control the rate of the spring and stop the whole package from bouncing around mercilessly.

As a rule, the lower you run the car to the track surface the stiffer the spring rate required to stop the vehicle bottoming out. Selection of front to rear rates will also dynamically affect the balance of the car. Stiffer front rates will induce more understeer and make the car push more, while a stiffer rear rate will add more oversteer – probably not something you really want in a high-speed GT-R.



These slide-adjustable K-Mac swaybars are a little different to most, but work a treat

SWAYBARS

Reducing the roll angle of the car by levering against the opposite side of the vehicle to keep it flatter through corners, swaybars, or 'anti-roll bars', are a solution for road-based vehicles that have less than perfect chassis geometry. For example, Formula One cars do not, in fact, run a conventional roll bar arrangement. Their chassis is designed from the outset not to require such adjustment... but they are in a different league to this discussion.

The advantage of upgraded swaybars is to be able to control the roll angle of the vehicle while retaining some kind of spring softness to keep the vehicle comfortable to drive or, in fact, keep the wheels on the surface of the road/track. By nature, though, a swaybar change will change the amount of tyre loading generated and in turn change the dynamics of the GT-R markedly.

A larger diameter rear roll bar will increase the natural tendency towards oversteer with the rear end stepping out, while a larger diameter or stiffer front bar will induce understeer.

It's important to understand that these handling conditions will be noticed in steady-state driving applications where the chassis is balanced at constant throttle through the radius of a long corner. Suspension changes like this will rarely affect power-on handling conditions; that's a situation more easily rectified with an improved driving technique.

There are big gains to be had with proper camber control

CAMBER CONTROL

Now we have the springs and bars set for the application, we can then look at getting the right wheel articulation to make the whole shooting match work correctly, and there are some big gains to be made here. The biggest mistake that is commonly made is running too little rather than too much negative camber, and with the GT-R that holds true on both ends of the car.

The concept of adding negative camber to the GT-R (or any car) is to keep the driven wheels as flat to the road surface as possible through hard corners, which ultimately delivers improved corner grip and increased speed.

The natural tendency of a stock alignment road car is to roll over on the outside shoulder of the tyre as the wheel tucks under, reducing grip and flogging the out-side edge of the tyre in rapid order. The faster you go, the quicker it happens.

Working out the right amount of camber is a job for the technician with a tyre temperature probe. Staked across the inner, outer and centre of the tyre, you want to set the camber to see the most even spread of tem-perature as possible, normally the inside edge being some 10° hotter. If you can get to this point, then you will have your camber in the slot, which is normally around -3 to -4° on the front and -2 to -3° on the rear.

Achieving this kind of camber will require both upper and lower camber adjusters in the GT-R at the front. Lower arms made by companies such as Ikeya Formula will see around -3.5° max, so a shorter upper link (many different types of these exist) will allow the additional camber adjustment. Rear camber arms for the GT-R also exist both upper and lower, but upper arms alone will give plenty of adjustment to get a nice useable 2.5° in the back end.

Note, what works on the track in terms of an aggressive negative camber adjustment will also reduce braking performance and overall straight-line grip due to a smaller rubber contact patch. The trade-off is well worth the effort, though.

Setting up toe for the track versus the street means two totally different set-ups

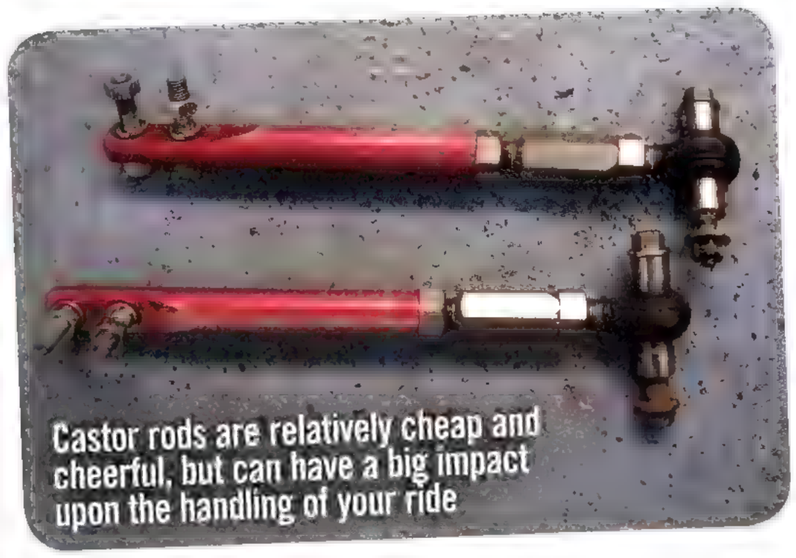
TOE CONTROL

Stiffer bushes throughout the front and rear end of the GT-R are required to stop the wheels changing toe angle (hence wanting to steer the car) under heavy braking. Conventional rubber bushes can deflect wildly and try to turn the car when you least need it.

The solution is double-edged, with stiffer urethane bushes giving less deflection and pushing straight into the arms and cradles, but the best solution is with solid aluminium bushings that give absolutely zero deflection, but at the cost of increased harshness.

Another consideration for the GT-R is controlling the amount of rear toe change under all conditions that is added by the Super HICAS four-wheel steering system. Notably, the R35 GT-R went away from four-wheel steering in search of faster out-of-the-box track performance, so we recommend you do the same with your older version GT-R.

There are many different HICAS lock systems that exist for the R32–R34 GT-R, with most of them working on the simple operating principle of replacing the conventional rear steering rack with a solid metal bar, which removes all of the flexing in the rear end.



Castor rods are relatively cheap and cheerful, but can have a big impact upon the handling of your ride

CASTOR RODS

Plenty of castor is required in both drift and high-powered circuit cars (at least in my opinion), as this stops you having to manually wind steering lock off the car, and lets the steering wheel self-correct through your fingers should you choose to let the wheel slip.

This is a simple explanation of the effect of significant castor angles, and in all my testing running as much as possible on a GT-R seems to have a positive improvement on its track handling.

The limit of castor adjustment is normally the clearance between the front tyre and the inner guard on the car. Run too much castor and the front wheels will grab, as they have been physically shifted forwards towards the guards. Give yourself some clearance here to save some pain later, but by all means install aftermarket castor rods, as they can really transform the steering behaviour of the car.

Roll centre adjustors are not well understood, so talk to an expert like Whiteline

ROLL CENTRE ADJUSTMENT

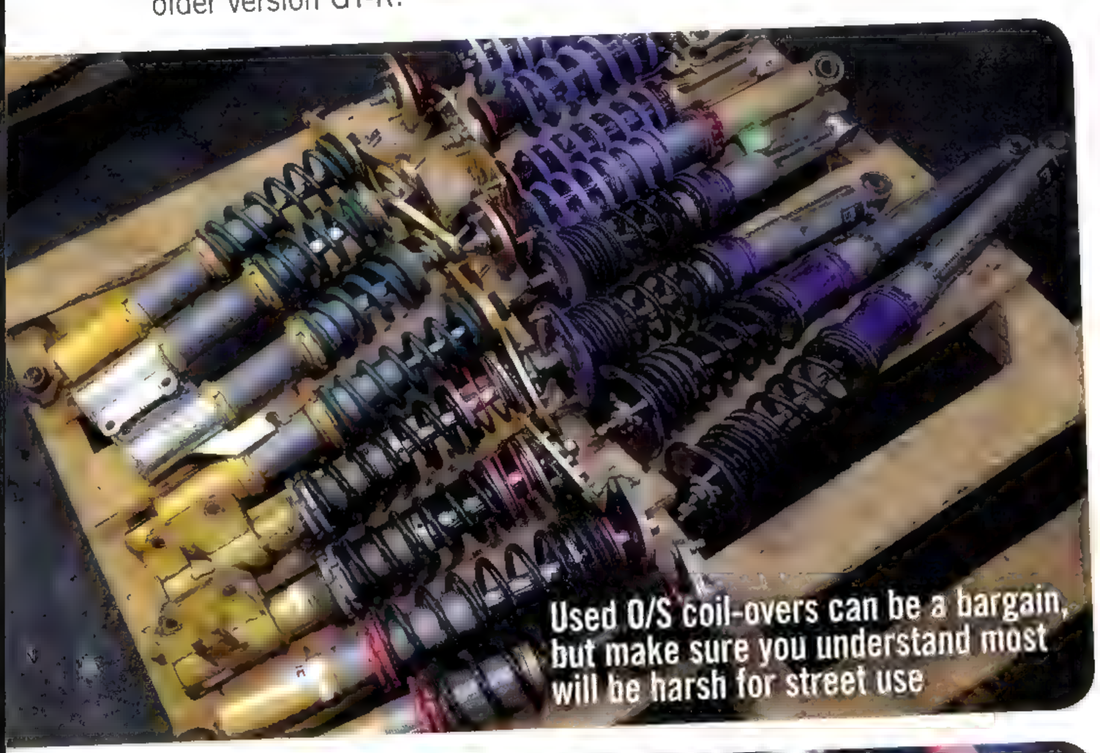
A dark art to the casual racer, changing the roll centre of the car is something that is normally only carried out by experienced suspension folk. Understand, though, that changing the ride height of the car will change the roll centre accordingly.

What is the roll centre? The simplest explanation is that the roll centre of the vehicle is the vertical point around which the body rolls. In other words, the lower the roll centre of the suspension, the more the vehicle will want to roll over on the suspension. The higher the roll centre, the more resistive to body roll the chassis will become.

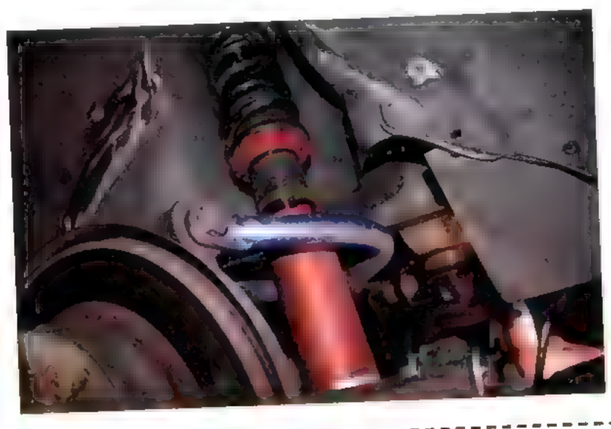
You neither want a roll centre that is too high, nor do you want a roll centre that is 'through the floor', as the vehicle's handling will be changed dramatically and not always (rarely ever) in a positive fashion.

Changing the roll centre in a wishbone or knuckle-style suspension like the GT-R is not a simple process that can be carried out on the fly. You see V8 Supercar teams change the rear roll centre in pit stops by winding the Watts linkage in the rear up and down, but they can only do this due to having a solid axle in the rear. Changing their front roll centre requires hardware changes in the front end just as the case with the GT-R.

Normally, revised ball joints that move the base position of the arms are used to pull the roll centre up on lowered cars, moving it back closer to stock settings, or at least this is what most of the aftermarket roll-centre kits I have seen try and achieve. Consult with the suspension supply company you have chosen as to the real-world effects of their roll-centre modification before jumping in.



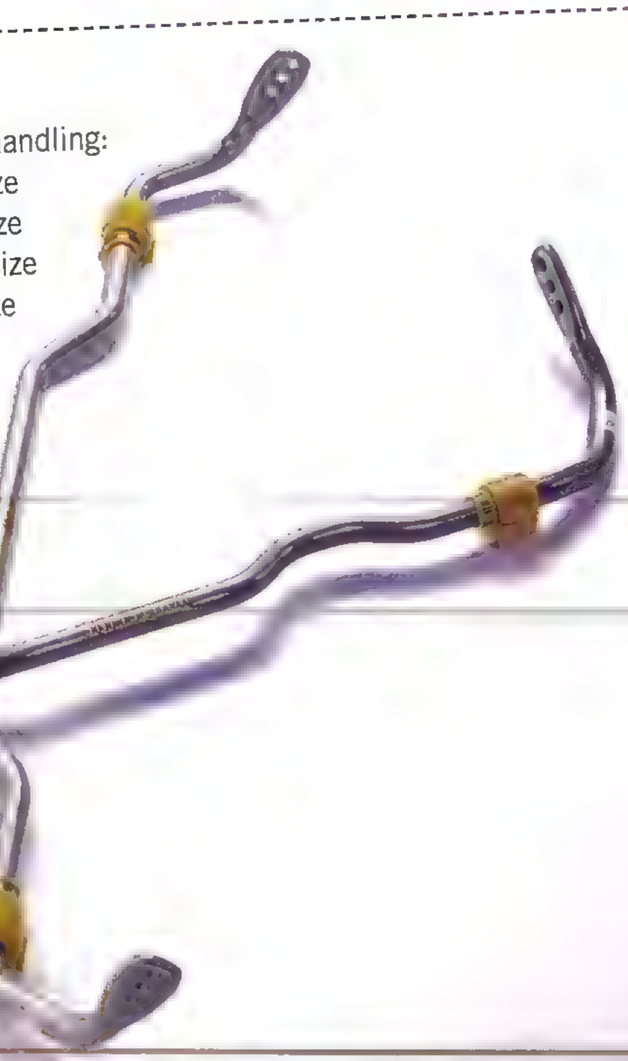
Used O/S coil-overs can be a bargain, but make sure you understand most will be harsh for street use

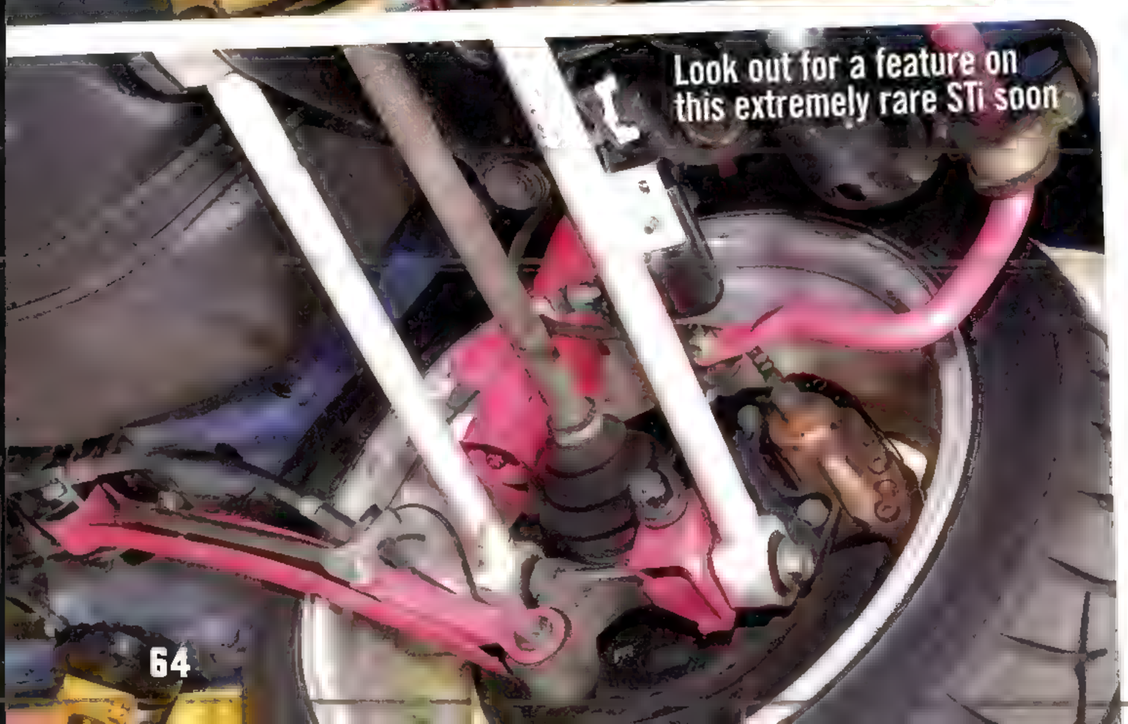


BAR GUIDE

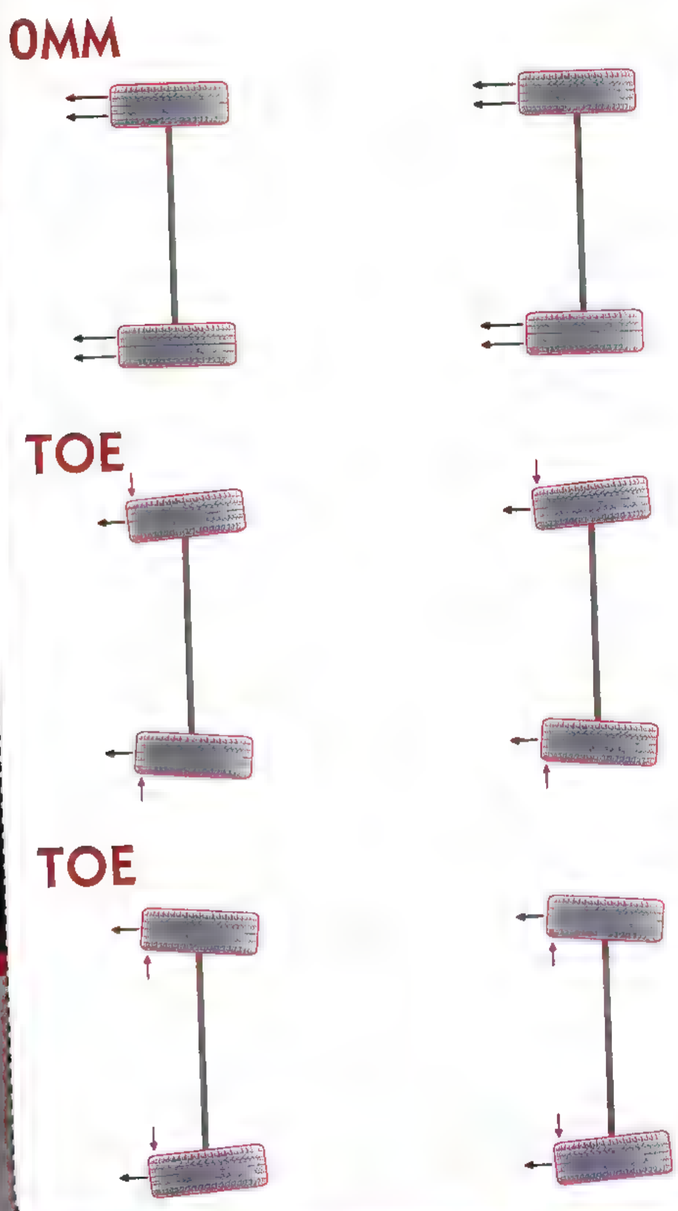
Whiteline Jim's simple swaybar guide to better handling:

Front-wheel drive – increase the rear swaybar size
Rear-wheel drive – increase the front swaybar size
Four-wheel drive – increase front then rear bar size
All-wheel drive – increase rear then front bar size





Look out for a feature on this extremely rare STi soon



FEELING

Toe is a setting that defines how much the front or rear wheels are pointing in or out compared to their straight-ahead position. This is usually measured in MM by the amount of difference between the leading and trailing end of the wheels. Toe settings affect tyre wear, straight-line stability and turn-in. When the front edges on a pair of wheels are set so that they are pointing in towards each other, this is called toe in or positive toe. Inversely, when they point away from each other, this is called toe out or negative toe.

For the least amount of tyre wear and minimal power loss, the wheel alignment should be set up for 0mm toe. This means that the wheels are pointing straight ahead. The science behind this is pretty simple. On 0mm toe, the wheels are all working together to roll the car straight ahead. Any stress on the tyres will mainly be from acceleration and braking.

However, toe in can be useful in terms of stability. Put short, toe in increases a car's stability by neutralising the affect of the bumps, cracks, and rough spots on our roads.

On the flip-side, toe out is the best set-up for a quick turn-in. It's most commonly seen at the racetrack. A toe-out set-up can prove to be quite unstable when it comes to dealing with bumps on the road. However, with the smooth clean surfaces offered on a race track, this eliminates such urgency for stability. Race drivers can deal with a bit of twitchiness in their cars at the reward of quicker turn in. When it comes to toe, it's basically a trade-off between stability, and turn in.

At the back, rear toe out increases a car's willingness to oversteer, while rear toe in increases a car's willingness to understeer. Rear-wheel drives naturally are inclined to oversteer so are commonly tuned in with some toe in. Inversely, front wheel drives generally like to understeer so are usually toed out.

The biggest mistake that is commonly made is running too little rather than too much negative camber

IN SUMMARY

The GT-R chassis is a simple thing to adjust for track work providing you can get your hands on the right parts. The design of the suspension (or the actual lengths and shapes of the arms) is fairly unique, hence you may need to shop around to get the bits to allow the adjustment you are chasing. The actual settings don't vary much from any other track car, though, with aggressive front negative camber, some 2mm toe out each side (at the front) and a slight amount of toe in (at the rear). Try these kinds of settings out and the improvements in your lap times will be marked.

The race suspension program KW Competition has been developed for national and international motorsports. KW Competition is used successfully by several race teams on many race tracks worldwide.

- 2-way and 3-way adjustable
- Motorsport suspension for the most popular race series and top-level motorsport
- Numerous national and international motorsport successes

Made in Germany

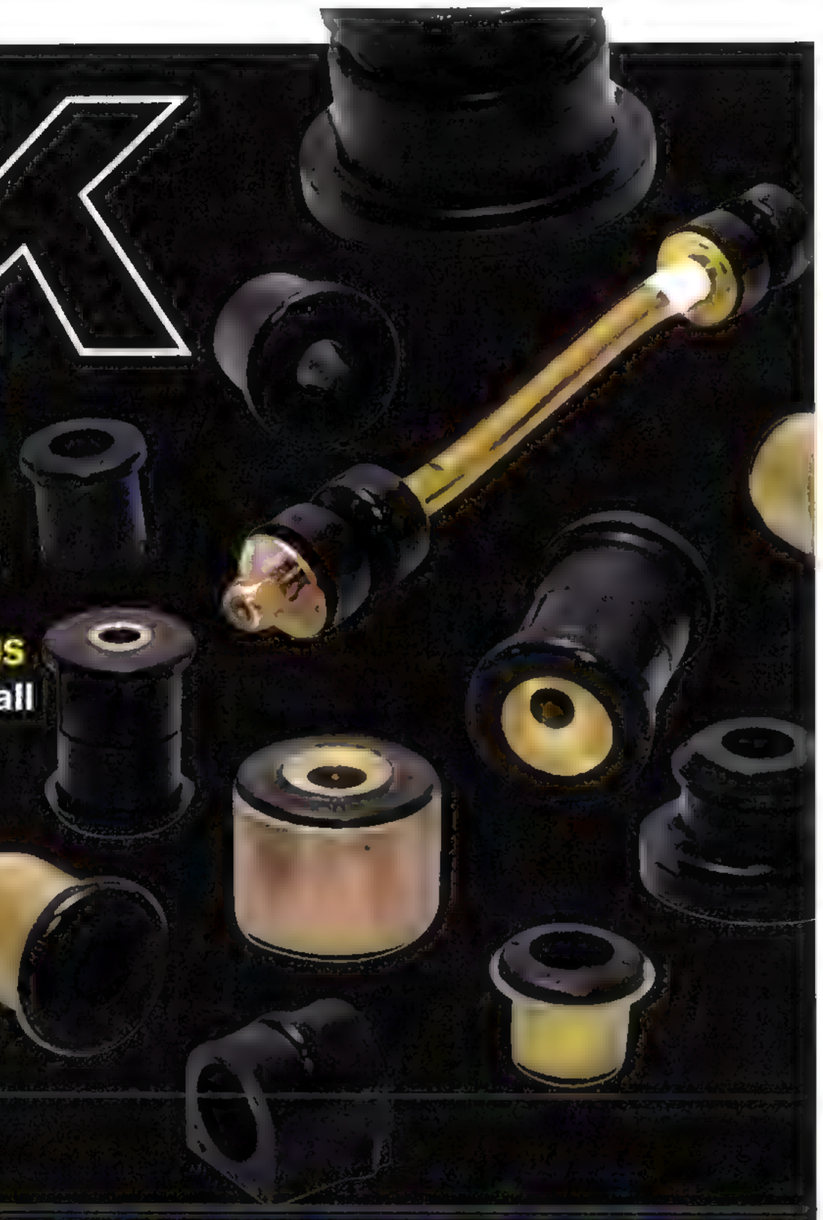
KW® Competition

www.KWsuspensions.de

Please contact us on (02) 9531-8966 for our interstate KW Partners

East Coast Suspensions · 35 Alexander Avenue, Taren Point 2229
phone: (02) 9531-8966 · sales@eastcoastsuspensions.com.au

BLACK



POLYURETHANE SUSPENSION BUSHINGS NOW AVAILABLE

WHITELINE PLUS is a range of BLACK progressive polyurethane suspension bushings and components. By 'progressive' we are referring to the polyurethane's ability to provide the quality ride of rubber at lower speeds and at higher speeds to become firmer, when under cornering pressure, for CHASSIS CONTROL and improved handling. **WHITELINE PLUS** has been developed with a 'NO COMPROMISE' objective, as it caters for all types of motor vehicles, all types of motorists, their driving styles and requirements.

SERVICING
It provides that OE look, with added reliability, durability, safety and ride quality characteristics for everyday vehicles and servicing.

PERFORMANCE
The road holding stability, handling and abrasive resistance for performance and 4x4 vehicles.

RESTORATION
The neutral (black) appearance that's perfect for restorers and racers.

AUS 1300 882 355 NZ 0800 880 189
NEW WEBSITE WWW.WHITELINEPLUS.COM.AU

WHITELINE PLUS

price is from

~~$1499~~

$1199

Limited time only

32 STEP DAMPER ADJUSTABLE
- Precise control damp valve
- Operates smoothly on all road surfaces
- Expansion/Suppression of shock adjustment

PILLOWBALL UPPERMOUNT
- Adjustable camber allows more/less on road track for all conditions
- Pillowballs increase steering response under all driving conditions
- Pairs from $750

PISTON ROD DESIGN
- High rigidity steel piston rods
- Meets with race/sport standards

SPORTS SPRING
- Made from high quality SAE9254 steel
- Chose your own spring rate at no extra cost

RIDE HEIGHT ADJUSTABLE
- Full length height adjustable
- Bound adjustable with separate spring locks
- High quality T6061 aluminium alloy used for all adjustment locks to provide a lightweight design that holds spring and vehicle down force

ALUMINIUM BRACKET
- Made from T6061 aluminium alloy by organic shaping to lighten weight and increase handling performance
- Specifically anodised surface to prevent inside corrosion and surface rust
- On various models camber can also be adjusted via the bracket aswell as the camber tops

SINGLE CYLINDER DESIGN

BRAND NEW!

Australian Made Thrust Bearings

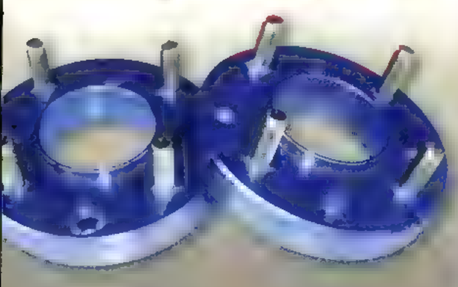
- Trade enquiries welcome
- Looking for re-sellers Australia wide

ISC Tube and Fin intercooler kits $499

ISC

www.ISC-coilovers.com

From $125 Pair



Adjustable Castor, Camber, Traction, Toe, Hicas & lots more!

www.isc-performance.com

CONTACT RYAN 0413 804 117 | RYAN@ISC-COILOVERS.COM

Surf's Up

Built by D-Surf Japan, this street-legal slider's just set up shop in the southern hemisphere

Words: Jason Round Pics: Eric Tang

The guys at D-Surf had even raised the suspension so as to avoid any breakage of the BN Sports kit on its travel

Sometimes you've got to ask yourself, why break your back, and bank account, building a drift car when Japan literally has them by the field-load? And that's precisely the scratching of head this tale started with.

Aged 24, manager Glen Brough has previously owned some nice machinery (see breakout), but with a thirst for drifting increasing, and the anti-hoon laws squeezing tighter, he decided to sell his beloved Onevia and build a dedicated track car.

After research, Glen actually ended up purchasing an S13 rolling shell to build from the ground up, but further key-punching revealed that with the funds he had, it would make more sense to simply import a car with the work done – easy.

Glen had seen Dave from Japanese Parts and Performance import well set-up track cars for a good price, so he searched around the auctions for an S14 Series II or 180 to suit. Weeks of email ping-pong saw no fruit borne, until a casual search for Skylines turned by this particular SR20ed, BN Sports-kitted R32.

"I love R32s, but I'm not a fan of the RB20. I love SRs, and when this came up, I knew it was me all over," Glen explains.

After a bit of bargaining with Japan, Dave relayed to Glen that the owners wanted to sell the car without the Works, oil cooler and Nardi tiller, but as these were essential to the car's appeal in Glen's opinion, arms were twisted and soon the car was on its way down-under.

He says, "The car was built by D-Surf in Japan as a street-legal drift car. D-Surf is a garage that does its own fabrication and builds some wild cars. They specialise in V-mount set-ups and use them on their own comp cars, including an S13, S14 and their new wide-body BN blister 180SX.

"While the car was in the holding yard, Dave actually had to go to the 'motherland' for business, but decided to drop in and have a look at the new weapon. When he returned to Australia, I met up with him and said, 'Well, what is it like?'. He couldn't get the smile off his face. He said, "It's a turn-key drift car."

Dave even added that the guys at D-Surf had raised the suspension so as to avoid any breakage of the BN Sports kit on its travel. Try getting that kind of service from your local dealer.

Glen says D-Surf has been extremely helpful, providing paint codes and answering questions via email. He's discovered they're a bunch of crazy drifters who use their S14 in a number of MSC events.

Naturally, most owners would be screaming murder if they found photos and videos of their car being thrashed in a former life, but Glen loves that it adds authenticity to his purchase.

"I have managed to find a few videos and a lot of photos of my car in action in Japan," he says, "and the previous driver definitely knows how to steer. One of the videos shows tyre smoke pouring off the roof in top-end third gear."

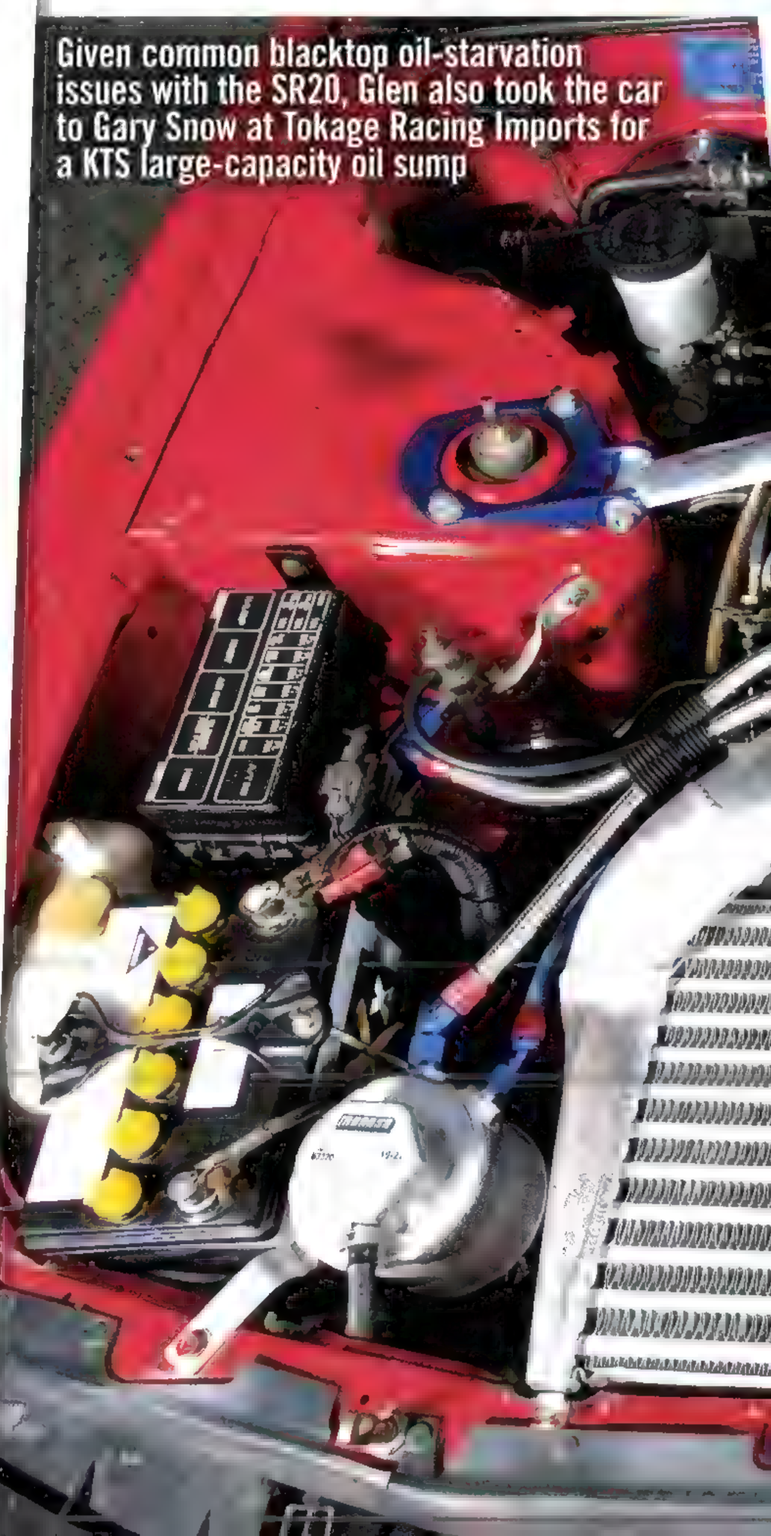
Upon arrival at the JPP workshop in Oz, it went straight onto the hoist, where all and sundry were amazed at how straight the under-body was. A track day at Queensland Raceway was looming on the weekend – the perfect opportunity to put it to the test after some tuning for Aussie conditions via Matty Spry at PITS. It was at this time the KTS cage was installed, too.

"I originally thought 'I'll just drive around the 1st lap to feel out the car'," Glen told us, "but in entering the first corner the car was screaming to be sideways. Before I knew it, I was full lock peeling smoke of the rear tyres."

In the coming months, Glen competed at Parklands in the level-two drift series with good friend Aaron Brown in the Tokage Racing Imports SR20-powered four-door R32. "The two SR-powered R32s looked great together."

Aaron had later been invited to drift at the off-track Gold Coast Indy event, but had to pull out. So, he transferred his entry to Glen and gave him the opportunity to drift at the event.

"I lasted five laps and broke the front bar in a little collision with a tyre stack. I then had to retire early, as one of



Given common blacktop oil-starvation issues with the SR20, Glen also took the car to Gary Snow at Tokage Racing Imports for a KTS large-capacity oil sump

This isn't a rock-hopper, so the suspension's been wound down 4in in total considering street duties have been given away

ONE MORE TIME

If you've been reading (H)PI as long as I have, you'll definitely remember Glen's former SR20DET redtop Onevia as featured in issue 69 with serious dish and crazy body, otherwise known as the Tokage Racing Imports promo car.

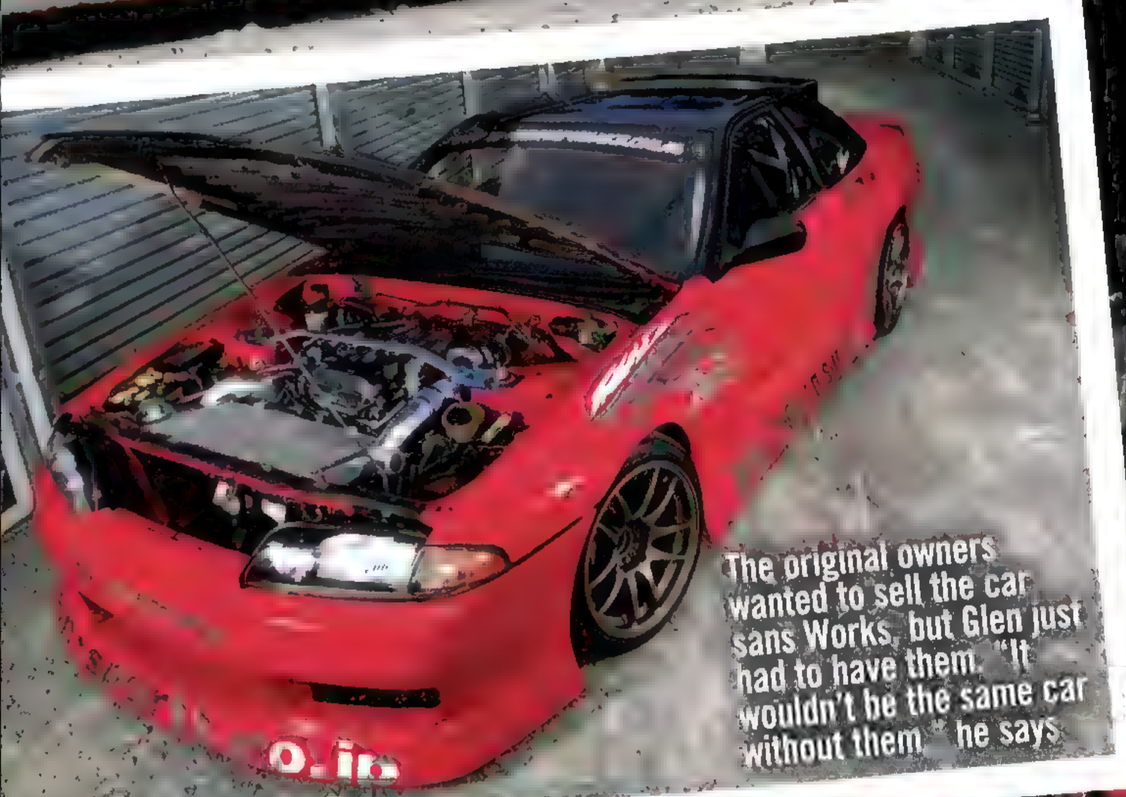
Says Glen, "This was one insane looking car that was literally built around the wheels. Driving this car on the street was absolute heaven. When I purchased the Onevia, people said 'you can't drift that, it's too pretty', but drift it I did.

"I remember one day having coffee in Surfers Paradise. I parked the Onevia behind a Lamborghini Murcialago. More people stopped and looked at the Onevia. After all, my wheels were wider (laughs). Needless to say, the owner of the lambo was not impressed and, in a desperate plea to get more attention drawn to his car, attempted a skid to leave but just made a little chirp and laughter was heard."

Glen's also owned a 1982 Laser, VS wagon, R32 four-door GTSt-4 and Holden Commodore VX, which currently serves as his daily/tow car.

ONEVIA SPECS:

Work 19x12.5 and 19x10.5 wheels, stretched 325/25 Yokohama tyres (rear), stretched 265/35 Nankang fronts, D1 wing, Yannack 70mm wide-body, 35mm bolt-on flares, SR20DET redtop (250hp), painted by D1 driver 'Hoshino' in Team Orange colours, D-Max front guards



The original owners wanted to sell the car sans Works, but Glen just had to have them. "It wouldn't be the same car without them," he says

The KTS cage was installed in Australia, though might be seeing some upgrades in the coming months

HCR32

As far as 1992 Skyline Type Ms go, this is a clean example, and especially so given its life as a career drifter

The previous driver definitely knows how to steer. One of the videos shows tyre smoke pouring off the roof in top-end third gear

the oil cooler lines had broken and I lost about a litre of oil. That oil cooler has since been removed and will be upgraded soon."

Glen tells us he's given up on the slower and smaller tracks now, as the R32's been set up for high speed, perfect for QR when turn two is open.

Even better, Glen's been doing some research on Google Japan and spied that the D-Surf team has put his drift video in the R32 on a Japanese drift forum, listing his name and email. You see, the art of skid is universal – no translation required.

As for the crystal ball, Glen's planning on finetuning the suspension, painting the interior and adding some additional bars to the cage. That's it. He also has some words for those naysayers out there...

"A lot of people will stand by the fact that built is better than bought. I have a huge respect for people who build such amazing cars and sometimes built is better than bought, but every now and then there is a car that 'slides' through and makes a stand. I am lucky to be able to own such a car.

"For all the readers who are looking to maybe buy a new car or build a new car, it may pay to have a look and see what you can get in Japan. There are hundreds of websites with some absolutely wild cars for sale. Through the right importer who knows what they are doing you can pick yourself up a good deal on a track-ready weapon."

For aiding and abetting his madness, Glen would like to say thanks to Dave Lawrie, Bronson and crew at Japanese Parts and Performance [(07) 5597 4154] for making the importation process so smooth and help in sourcing parts and organising track days, Gary Snow at Tokage Racing Imports [(07) 5531 3984] for his ongoing support and workshop usage for the last five years with previous/current vehicles, Jason Armstrong at Adrenalin Autostyling (0433 238 101) for his fibreglass and paint work, and D-Surf Japan for building such a great car and support with information.

Thanks too go out to twin cousins Kyle (Laurel RB25/30) and Adam (Cefiro RB25DET). "I would like to thank you guys for your hard work in helping make this shoot possible. These guys have been keen to help with all of my track events, servicing, mods and any other odd job that needed to be done with an endless supply of well-used info. I hope to see both of your cars in PI when your builds are complete." And so do we.

At the moment the car's for sale, too – a tough decision on Glen's behalf – so any interested parties can contact us and we'll pass on your details.

VITALS

ENGINE 2L SR20DET four-cylinder turbo
POWER 304.3whp
POWER FROM FACTORY 202hp
POWER TO WEIGHT 0.18kW/kg

ENGINE HARDWARE

KTS large-capacity oil sump, Yashio Factory brass racing radiator, twin thermofans, custom coolant header tank, Tomei 1.2mm head gasket and 256° Poncams, Power Enterprise PE1420 (IHI) 380hp turbocharger, HPI manifold, HKS dome pod filter, Trust custom V-mount intercooler, Sard 550cc injectors, R33 GT-R fuel pump, Nerve tunable EMS, HPI 3in split dump pipe and 3in stainless steel straight-through exhaust system

DRIVETRAIN

Nismo Super Heavy Duty single-plate clutch and GT two way LSD, KTS solid gearbox mount

BRAKES/SUSPENSION

DJ brake pads rear, Kel Office coil-overs, Cusco front and rear strut braces, Cusco rear pillar bar, Ikeya Formula traction rods, Cusco solid mount rear cradle spacers, R33 Series II front lower control arms, Tein adjustable castor rods, modified hubs/knuckles, aftermarket rack ends, KTS solid steering collar

WHEELS/TYRES

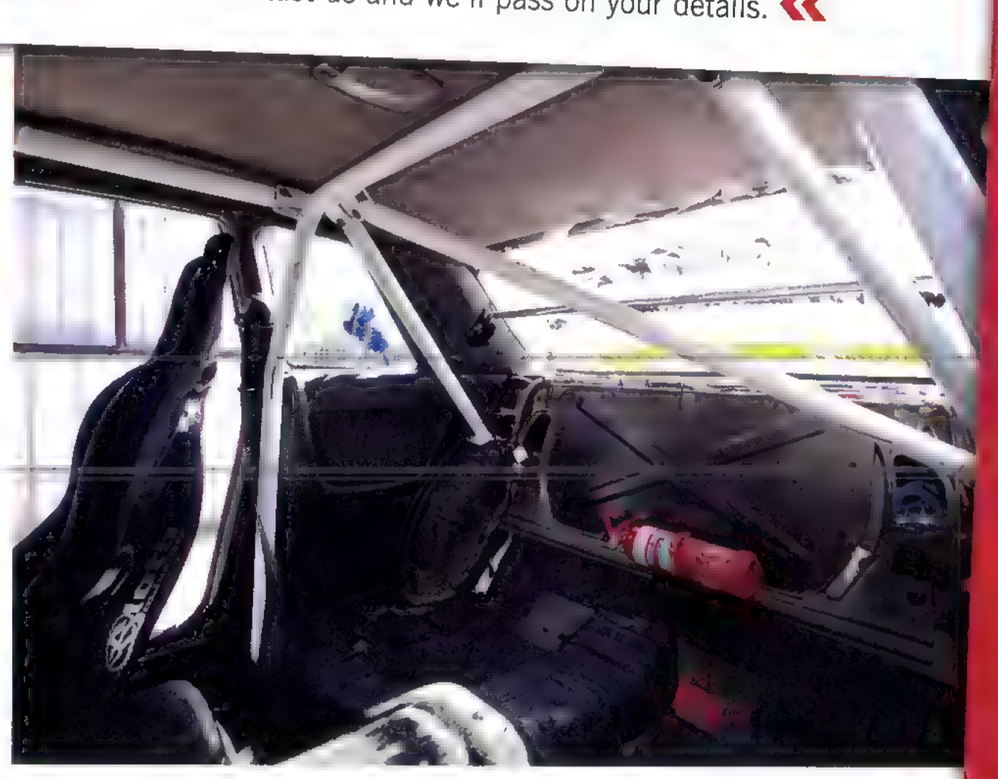
17x9in +16 Work Emotion CR Kai wheels, 215/45 front Goodyear Revspec and 235/45 Federal 595 rear tyres

BODYWORK

BN Sports front bar, vented bonnet, rear bar and side skirts, D-Max boot-lid wing and roof wing, Rockpaint Red with House Of Kolor Rainbow flake respray, N1 non-projector headlights

INTERIOR

KTS seven-point roll-cage, Bride fixed-back bucket seat (driver), R32 GT-R seat (passenger), Nardi Mini steering wheel, Nismo gearknob, monster tacho, Yashio Factory digital water-temp gauge, HKS electronic boost controller



Choice of the Factories

N°1** Motul **Autech** GT-R SUPER **GT

Our experience is your success.

*Motul 300V is designed and developed in conjunction with some of the **world's top factory race teams,** incorporating all of our latest technological innovations.*

*Working with legendary race teams including the Subaru World Rally Team, Nissan Motorsport and Honda Mugen, our singular focus and **150 year history** has allowed us to create an oil that **exceeds all known standards.***

*Motul 300V offers you the engine protection you desire and the performance you crave. From daily performance to the pressures of racing, **Motul is your technical partner for success.***

*To discover the range of 300V Performance Oils, visit **www.linkauto.com.au***

LINK INTERNATIONAL

*Call us to find your nearest dealer: **(07) 3382 5000** or visit our website **www.linkauto.com.au***

Available at Autobarn, Repco and Performance Workshops

MOTUL

f l u i d force

Unit 7. 17-19 Gould St, Strathfield South 2136 NSW

OPEN 6 DAYS Tel: (02) 9742 3330

SECRET

OVER 30 DIFFERENT STYLES

CARBON FIBRE BONNET

MITSUBISHI: EV07/EV08/EV09/EV010/Lance 07-10
HONDA: Civic EG/ EK96-00/Integra DC2/DC5/S2000
NISSAN: 180sx/S14 series 1-2/ S15/300ZX/350Z/GTST32/GTST33 GTT34(turbo/non-turbo)/GTR32/GTR33/GTR34
MAZDA: RX7 RD3S/Mazda 6
TOYOTA: Supra JZA80
SUBARU: WRX/STI 1999-2010 Models

PLUS MORE & MORE

SUPRA JZA80 **$800**

350 GT V35 **$800**

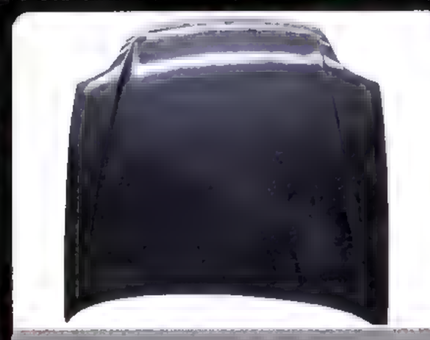
RX8 **$800**

WRX/STI 08-09 **$800**

WRX/STI 99-00 **$800**

GTR33 **$800**

INTEGRA DC2 **$750**


PRELUDE 97-01 **$800**

EVO 10 **$880**

Over 30 styles of carbon fibre bonnet **IN STOCK**

Over 10 Different Styles of Carbon Fibre Front lip **IN STOCK**

EK Civic 98UP C/F LIP

G35 350GT C/F LIP

EVO 7 C/F LIP

EVO 9 C/F LIP

WRX/STI 06-07 C/F LIP

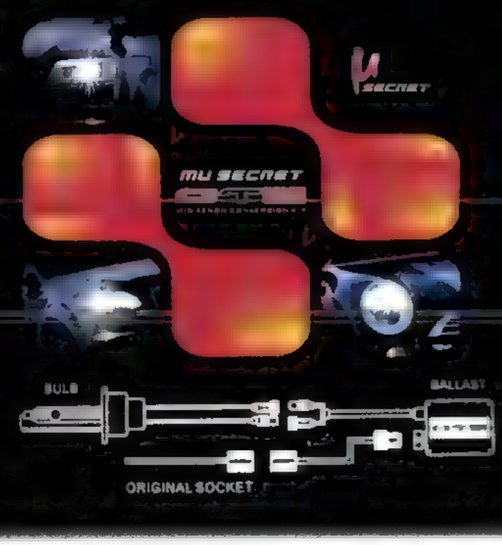
EVO 8 C/F LIP

Mu Secret GT HID (Black Edition)

FREE-LED (Pair)

FREE Delivery within Australia

- Super Slim
- Life Time Warranty
- Available In:
  H1/H3/HB3/HB4/H7/H11 **$250 Kit**
  H4 (hi/low) **$300 Kit**



Find us on Facebook

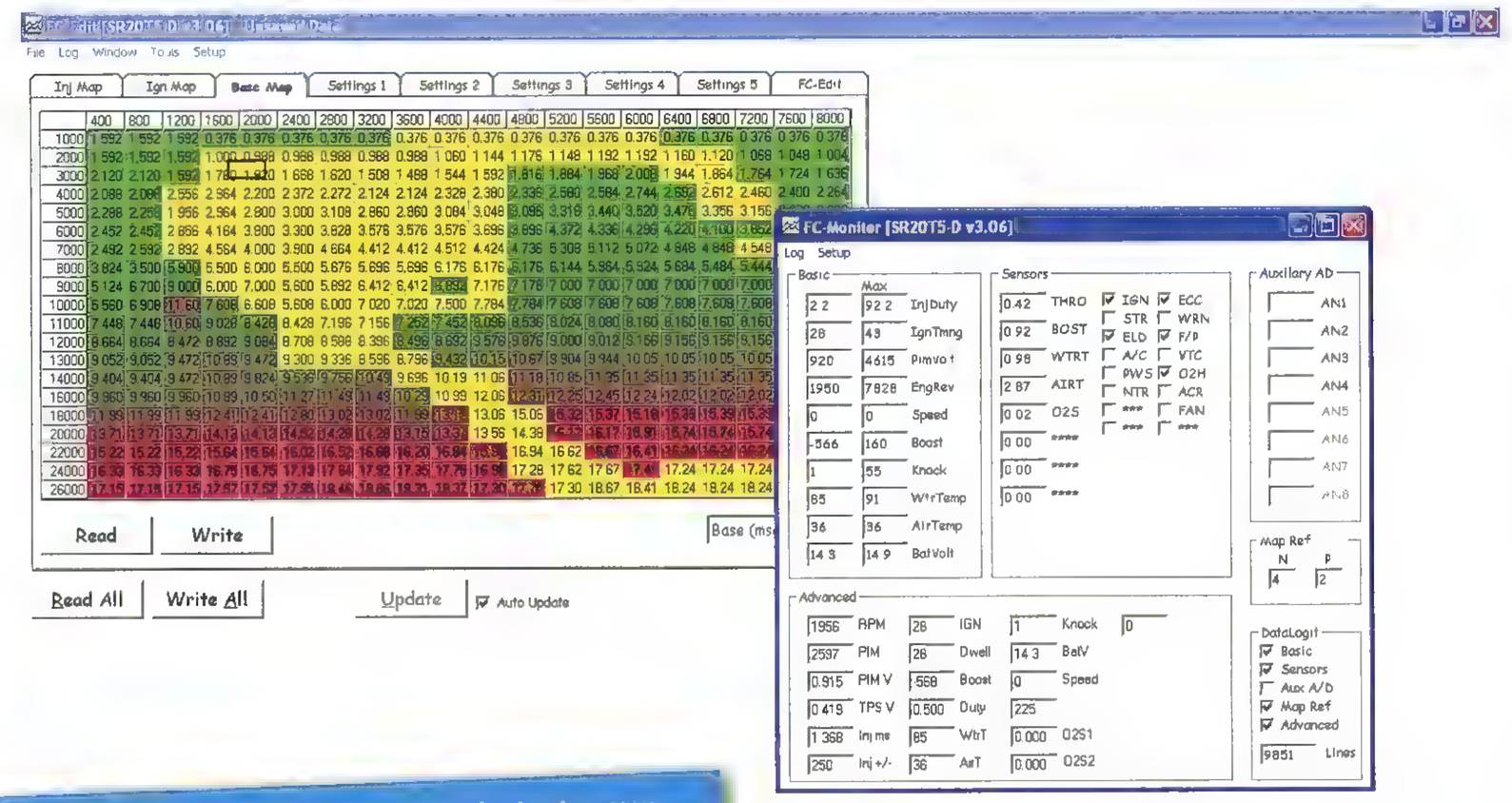
Email: sales@musecret.com.au

www.musecret.com.au

Oil Spill

The good oil on oil to put all those myths to bed

Words: Martin Donnon Pics: Martin Donnon and EMG archives



Getting fuel mixtures in the slot the instant a new engine fires into life is 100-percent critical to reducing ongoing oil-consumption problems. Running a little on the lean side doesn't hurt either

No one single piece of automotive troubleshooting and analysis attracts as much innuendo and rumour as oil consumption. Fables based on Dad's oil-burning experience with an FX Holden and a cure with handfuls of baking soda down the bores are translated through to the higher tech realm of modern low-emissions engines, which, if not treated correctly, are capable of burning oil like an old and tired farm implement.

Fuelled by widely spread and more often than not incorrect internet-based rumours, there is enough information about oil consumption around these days to go into a tailspin of confusion.

In fact, only recently I had a fairly heated discussion with a dealership service representative that pointed out up to a litre per 1000km is acceptable for their flat-four turbocharged engine, and if you should happen to tune the thing then expect to use 1.5 times to double that amount. The solution is to fit a catch can when the tune is carried out... apparently.

Personally, if we see an engine using more than 500mL of oil per 1000km of use, and that can even include race track use, then there is a problem that if addressed correctly can bring oil consumption down to acceptable levels.

Remember, no engine is ever going to not use any oil, just that some use more than others to the point where it is noticeable on the dipstick. Understanding the how and why, and then treating your engine accordingly, can reduce your chances of having an 'oil burner' significantly.

CAUSES

Whether it's an old tired Magna or a brand-new supercar, the causes of oil consumption are all one and the same. Oil passing into the cylinder is the only way that oil can be burned and discharged from the tailpipe.

There is no magic to this, and if your engine uses oil then there is either a leak out of the engine onto your garage floor or there is a bypass occurring in the engine that is allowing the oil to effectively leak past the seals, and into the combustion chamber or out of the turbocharger. This is a simple fact and can't be disputed, but the reality is that there are many ways that oil can be introduced into the burning process.

THE BANGER

Old, tired engines use oil for a multitude of reasons, but the all-enveloping diagnosis is that they are simply worn out and past their use-by date. Over time the engine has to wear as part of its operating process – no matter how good it is – and as this occurs there is going to be an increased level of oil consumption.

The common causes of oil consumption in older engines centre around the oil control ring on the piston losing tension, the valve stem seals wearing away and the turbine seal on the turbocharger having cried enough. It is not unusual for old and buggered engines to use oil. Hence, there is very little ever said or written about the subject. Simply recondition the thing for new performance and reduced oil consumption.

MODERN FACTORY ENGINE

Modern performance engines are a little different and without fail come equipped with low-tension piston rings. One of these rings is, in fact, the oil control ring (three piece) which is normally the last ring in the pack, and its job is to act as a 'scraper' against the bore surface and limit the amount of oil that goes past and into the combustion chamber. The whole reason for low-tension rings is low frictional loss in the engine's reciprocating process, good economy and hence good emissions.

Making the low tension ring pack on the modern piston actually mate properly with the bore of the engine is the critical process, and it's here in the first few hours of engine life that the engine's subsequent oil consumption is dictated. The issue comes in having the engine's piston and ring pack 'bed' properly. This bedding is the mating of the polished scraping face of the piston ring surface with the cross-hatched face of the cylinder bore.

THE PHYSICS

The first and most important problem is that the two surfaces that are trying to seal (ring pack and bore) are never perfectly round. They may, in fact, look round when observed with the naked eye, but when measured correctly even the very best bores have some kind of micro-ovality to them that means that the 'round to round' fit of the ring and bore is never 100% correct. Modern machining procedures such as

Nissan GT-R factory oil is a great mineral-based running-in oil for a multitude of hi-po engines and, in our experience, has proven its mettle many times

Redline EFI
Hyperformance Urban Motorsport
» Inhouse Dyno Tuning on Gold Coasts only Dynapack Chassis Dyno - The Worlds most accurate and repeatable Dyno
» Haltech and Turbo Xs Dealer
» Tuning all aftermarket ECU's including Haltech, Nis-Tune, Motec, Microtech, EMS, Wolf 3D, Apexi and GReddy Emanage Systems
» We also sell a huge range of reconditioned and new high flow injectors to suit all vehicles
» Suppliers of performance E.C.U's, fuel pumps, injectors, fuel rails, pressure regulators, custom fuel lines and more
» All performance vehicle servicing, mechanical repairs, upgrades, tuning and tyres
Silvia
Dynapack
Dynapack
Dynapack
31 Taree Sreet, Burleigh Heads QLD, 4220
PH: (07) 5593 5858
Email: redline_efi@hotmail.com

'torque plate honing' can reduce this ovality markedly and should be insisted upon come rebuild time.

Then there is the surface of the bore itself, which has light cross-hatch marking machined into it to provide for some oil to actually become retained during each cycle of the engine. If there were no marks in the bore, and the cylinder was perfectly polished, then sealing the two surfaces to stop excess oil bypass would indeed be very difficult, if not impossible.

One of the first things the engine builder looks for when pulling down an engine is to see if the cross-hatch is still evident, giving a great indication of bore wear.

As the engine first fires into life, then the requirement exists for the engine builder to do everything they can to ensure that the piston ring beds into the bore surface.

The very best way to do this is with moderate and instant load on the engine, which will cause the piston ring to expand slightly and start to wear the peaks and ridges from the machined bore surface. There are two very critical requirements here, though, that will make this process either straightforward... or an ongoing problem.

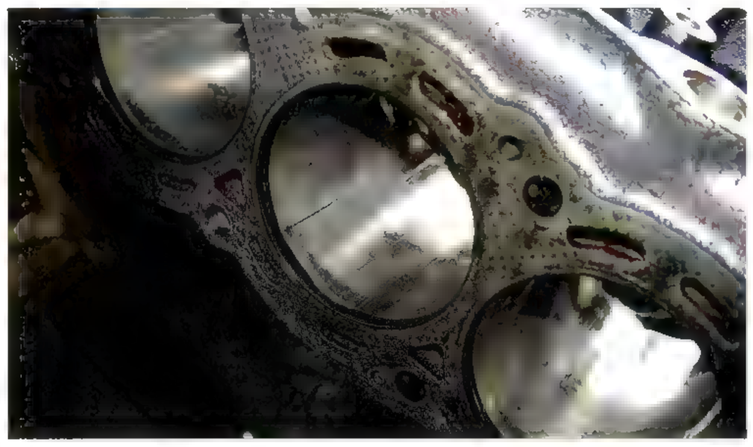
MINERAL OIL AND FUEL

Most engines will be run during this critical ring bedding phase with mineral oil in the sump. Lacking the film strength and overall lubrication qualities of a top-level specification and high-viscosity synthetic oil, the mineral oil will allow a greater amount of initial friction to occur between the piston rings and the bore

Oil control rings have thin faces with a scraper element in the middle to take the oil off the bore walls and keep it out of the combustion chamber... just enough, not too much, it's a difficult balancing act

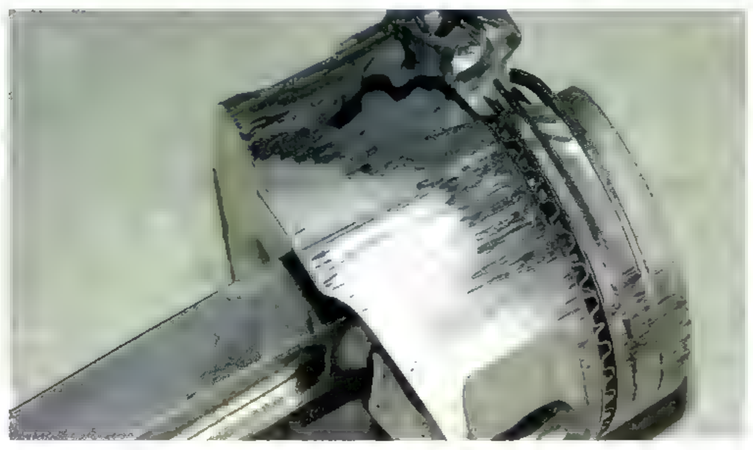
A torque plate bolts to the top of the cylinder block and 'pulls' the block into shape before the bores are machined. This is designed to ensure that the bore is totally round when the engine is assembled

PERFORMANCE
EXHAUST
CENTRE
• CUSTOM MADE EXHAUSTS TO YOUR SPECIFICATIONS, FROM STREET TO STRIP
• TURBO MANIFOLDS AND INTER-COOLER PIPING
PH: (02) 9683 5688 • UNIT B6, 23-25 WINDSOR RD NORTHMEAD NSW



Scoring of the cylinder bores as shown here by the vertical marks in the bore surface are signs of over-fuelling and poor lubrication, which can lead to excessive oil use

The engine that this piston came out of is going to use a lot of oil... There is nothing left of the oil control rings, so it's a no-brainer. This is an extreme example of what can go wrong



An oil control ring that hasn't bedded properly into the bore allows a lot of oil into the combustion chamber as evidenced by the burnt oil (black staining) on the upper part of the piston

wall and accelerate the bedding process in turn giving a rapid and effective piston to bore seal. This is obviously not the optimum requirement for engine bearing lubrication, but the trade-off is an important one.

There is always oil retained in the cross-hatching of the bore, and it's important that this is just the right amount, not too much oil of the wrong type – ie. a super-slippery and effective synthetic oil that can potentially polish and glaze the bore markedly reducing the ring seal, increasing oil consumption and just enough to ensure that excessive wear isn't an issue.

This is where tuning and over-fuelling is a difficult balancing act, as once the bores become polished and glazed with this thin chemical film, they are very difficult (if not impossible) to 'de-glaze'. In the bad old days bush mechanics would hold the throttle wide open and throw handfuls of 'Ajax' or similar into the inlet to re-scuff the bores... which is not a procedure we recommend.

A modern and totally standard engine should not present any over-fuelling issues during light to moderate load running. Good closed-loop fuel control ensures that the air-fuel ratio is kept in check, but up the injector size and match with a less than optimum tune and it's possible to create all sorts of issues.

The most significant of these is the excess fuel literally washing and diluting the oil out of the cross-hatch on the bore. Once this happens, excess wear begins to occur, which can manifest in scoring on the cylinder wall, with high oil consumption rates set to follow for the resulting life of the engine.

EARLY TUNE DURING RUN IN

Holding back on having an engine correctly dyno tuned then can go against the grain of bedding the piston rings to the bore properly. Our philosophy has always been to assess the engine for correct operation (make sure that it's not faulty from an assembly or parts viewpoint) over 100–300km of normal running and then tune without hesitation. The extra load imparted on the rings and RPM sustained by the engine during its tuning is normally a bonus to correct piston ring bedding.

Usually modern engines are hot load tested at the factory during the vehicle assembly process and in some cases operated up to at least 60 percent or their RPM limit in the earliest part of their life. This is a critical step for initial bedding, but the rest is up to you as the owner to ensure that there is consistent load and power production during the first phase of the engine's life to make this all important seal between the piston rings and bore.

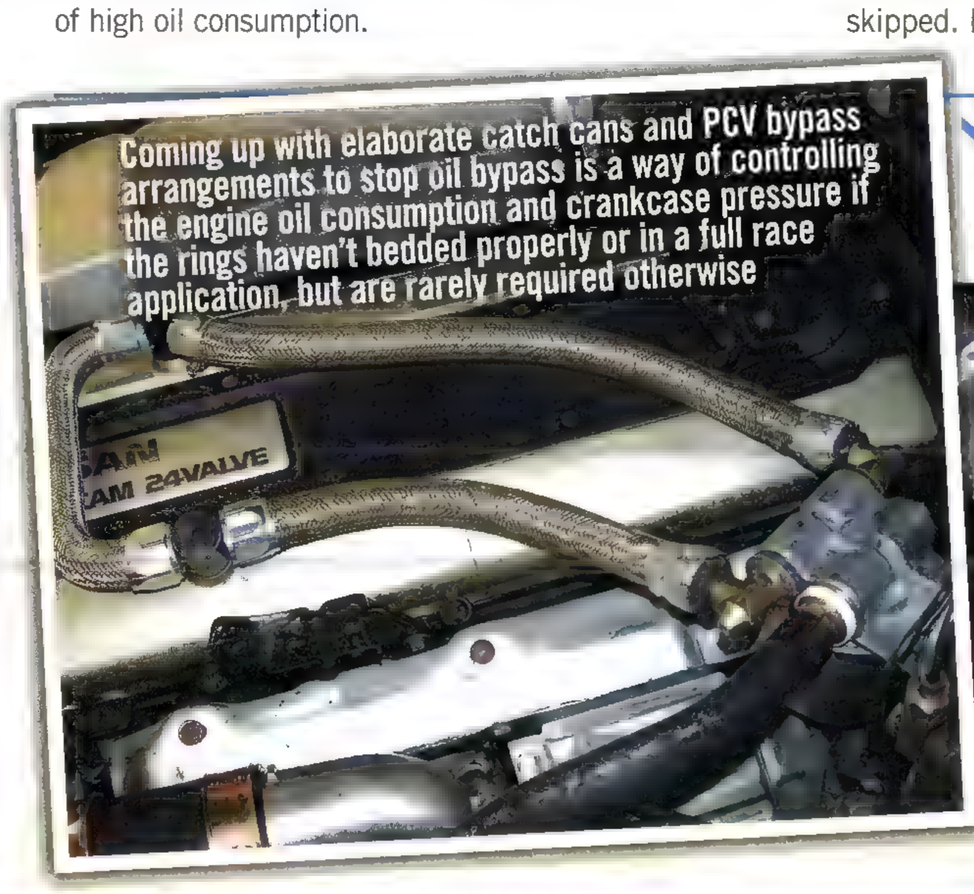
This philosophy of high load and moderate RPM can be in direct contravention to some vehicle manufacturer's running-in instructions, which are often biased towards strict low-RPM operation. All we can tell you is that our approach is one that has worked over numerous different manufacturers' high-performance engines over the past decade or two without any of them falling into the realm of high oil consumption.

AND...

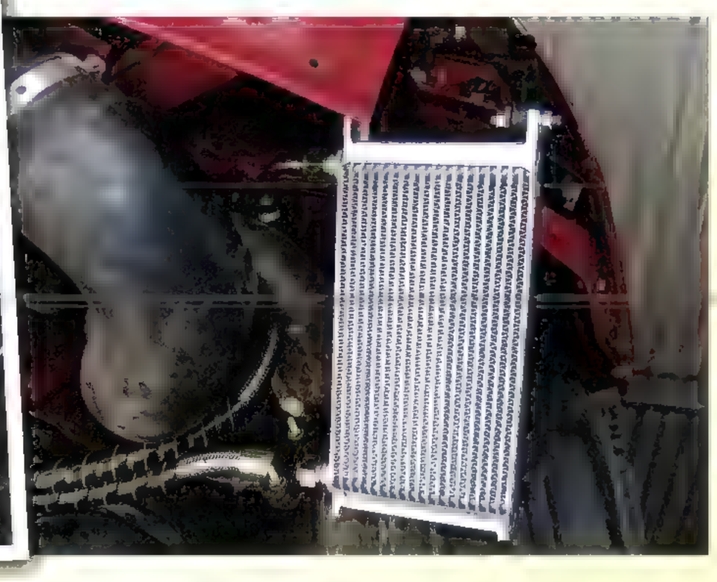
An engine that requires a catch can after tuning has taken place due to excessive oil consumption is masking other more inherent issues. Forget about increased cylinder pressure from boost and tuning causing low tension factory engine oil control rings to bypass; this simply isn't true.

Sadly, detonation can also cause poor ring seal by physically altering (cracking) the part of the piston that holds the rings in place giving much larger than acceptable clearance and matching high oil consumption.

Don't be frightened of using a high-quality synthetic oil in your engine after running it in properly and at load for less than 1000km. If the rings aren't bedded by that stage then they simply aren't going to. Accept no more than 500mL per 1000km of oil (under very hard conditions) as being normal oil use, normally it's much less and closer to zero. If there is any more, then you either have a problem engine or the basics of the running in and bedding piston to bore have been skipped. Do not listen to any other excuses. «


Coming up with elaborate catch cans and PCV bypass arrangements to stop oil bypass is a way of controlling the engine oil consumption and crankcase pressure if the rings haven't bedded properly or in a full race application, but are rarely required otherwise

Adding oil coolers to an engine to reduce oil temperature is a great idea for the race track but won't have a positive effect on oil consumption of a road car



Not all dynamometers are the same...
...be part of tomorrow's legend today!

The World's
MOST ADVANCED
CHASSIS DYNO

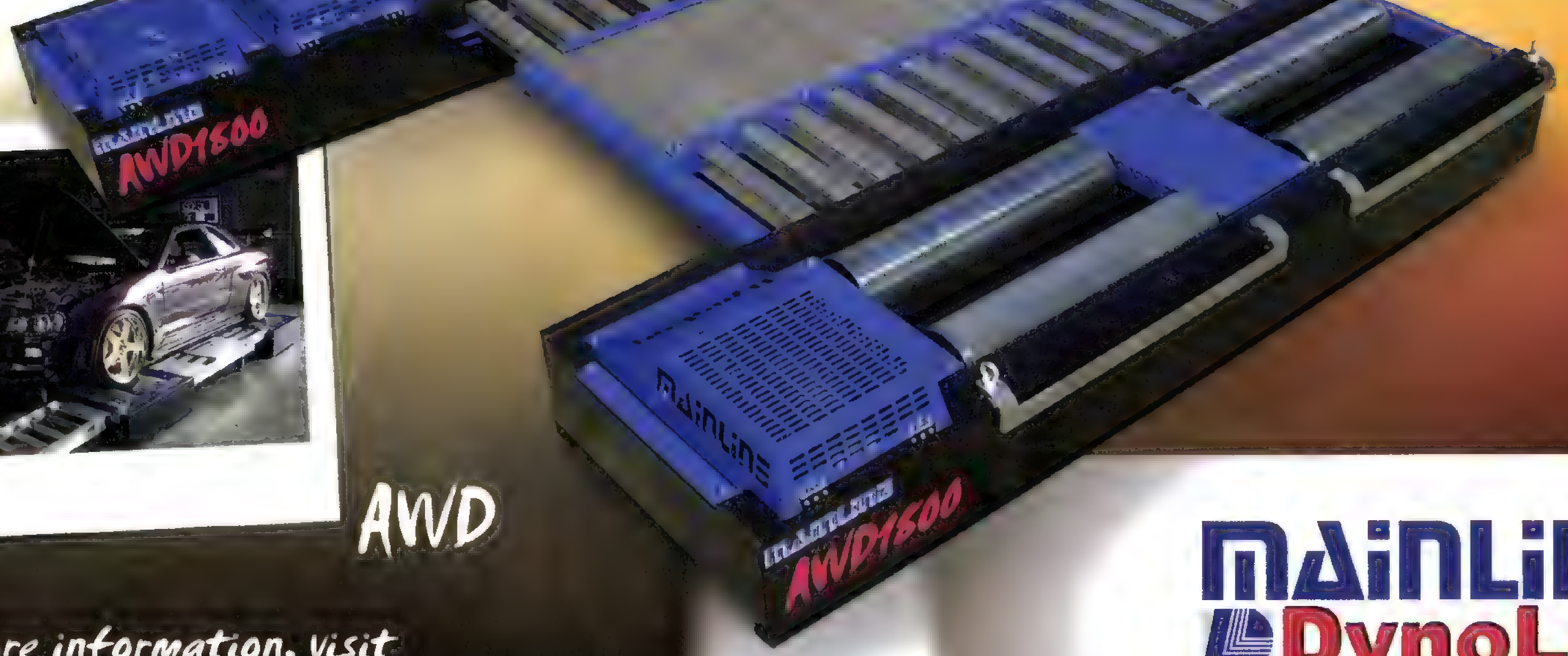
The state of the art control system ensures safe operating conditions for all vehicle driveline configurations, without any special setup modes or damage to driveline components.

Mainline DynoLog Dynamometers are the industry leaders for innovative technology, analytical software, advanced diagnostic concepts, and truly repeatable results.

- **Proudly Australian Made & Owned**
- **Precise, Repeatable Control System**
- **Advanced Diagnostic Test Functions**
- **Detailed Result Analysis & Reports**
- **Innovative Software Technology**
- **Multiple Channel Data Logging**

2WD

Heavy



AWD

For more information, visit
www.mainlinedynolog.com.au

Ph: +612 9773 8222 | Fx: +612 9773 8122

MAINLINE DynoLog Dynamometers

This advert is designed by autoimpact.com.au

GASBAGGIN'

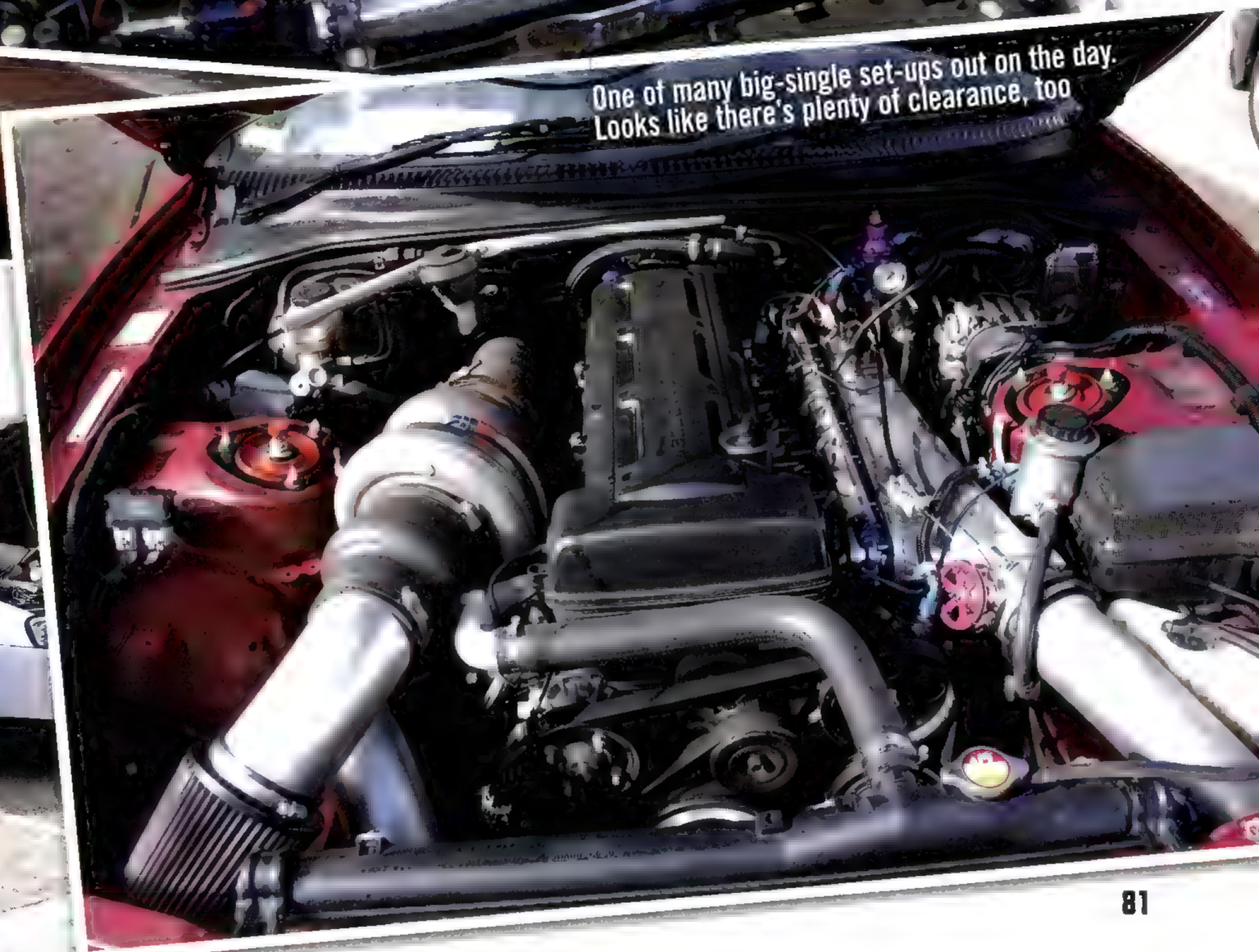
It was all Supras go for the annual GAS Motorsport Dyno Day

Words: David Gough Pics: Ashley Kmiec

Last year, the NSW Supra Club was again privileged to have its annual dyno day hosted by the mighty GAS Motorsport – one of the dojons of the local performance motor scene. This day was eagerly anticipated, marked by sleepness nights and endless forum chatter about who would come out on top. Members rolled in from all over NSW, with more than 60 club cars attending on the day.

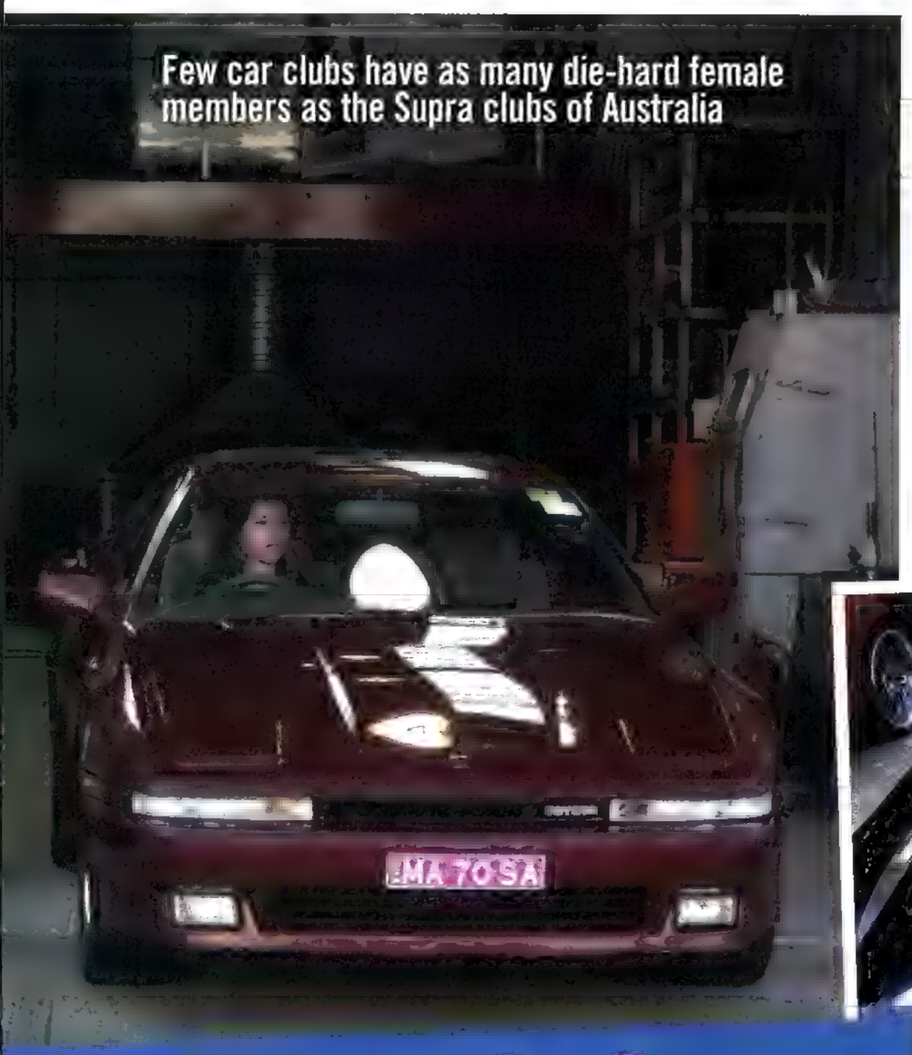
For some, the day was a chance for members to show off their performance machines and meet up with friends for a good old chat. For others, it was a chance to inspect the GAS Motorsport workshops and get up close with the GAS-powered show and drag cars, including the 1403rwhp 2JZ-powered GAS

One of many big-single set-ups out on the day. Looks like there's plenty of clearance, too



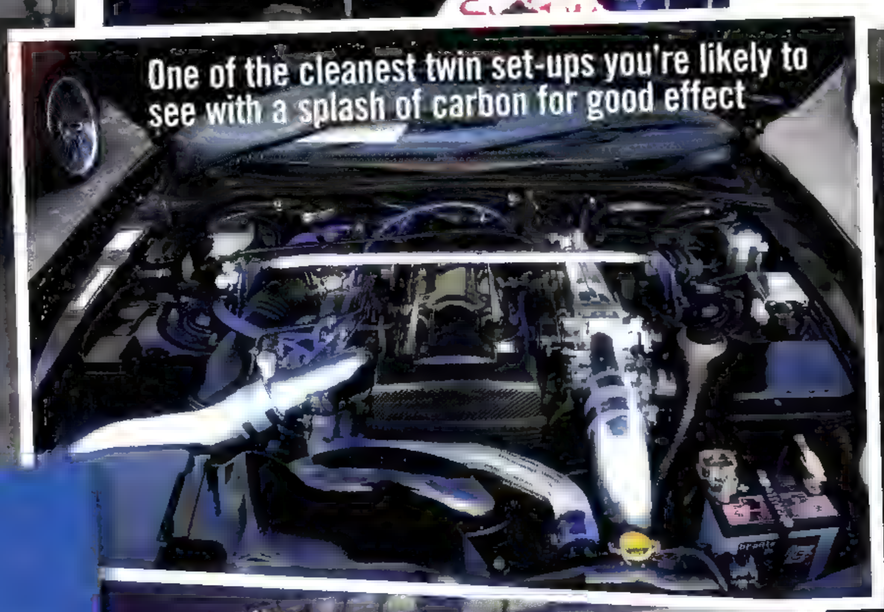
The 70-series Supras were well represented, with this undercover example posting a huge 384rwkW

Few car clubs have as many die-hard female members as the Supra clubs of Australia



Bonnet holder and car security solution in one...

One of the cleanest twin set-ups you're likely to see with a splash of carbon for good effect



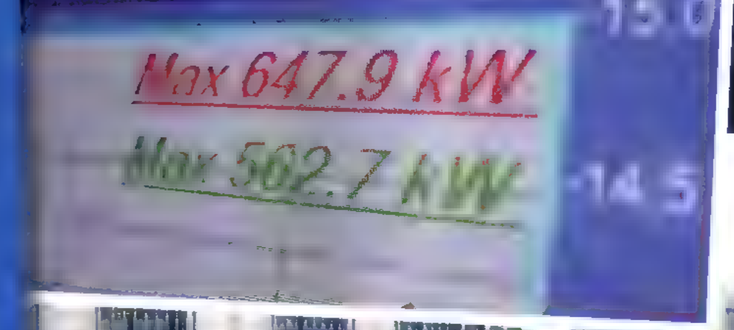
WHAT A GAS

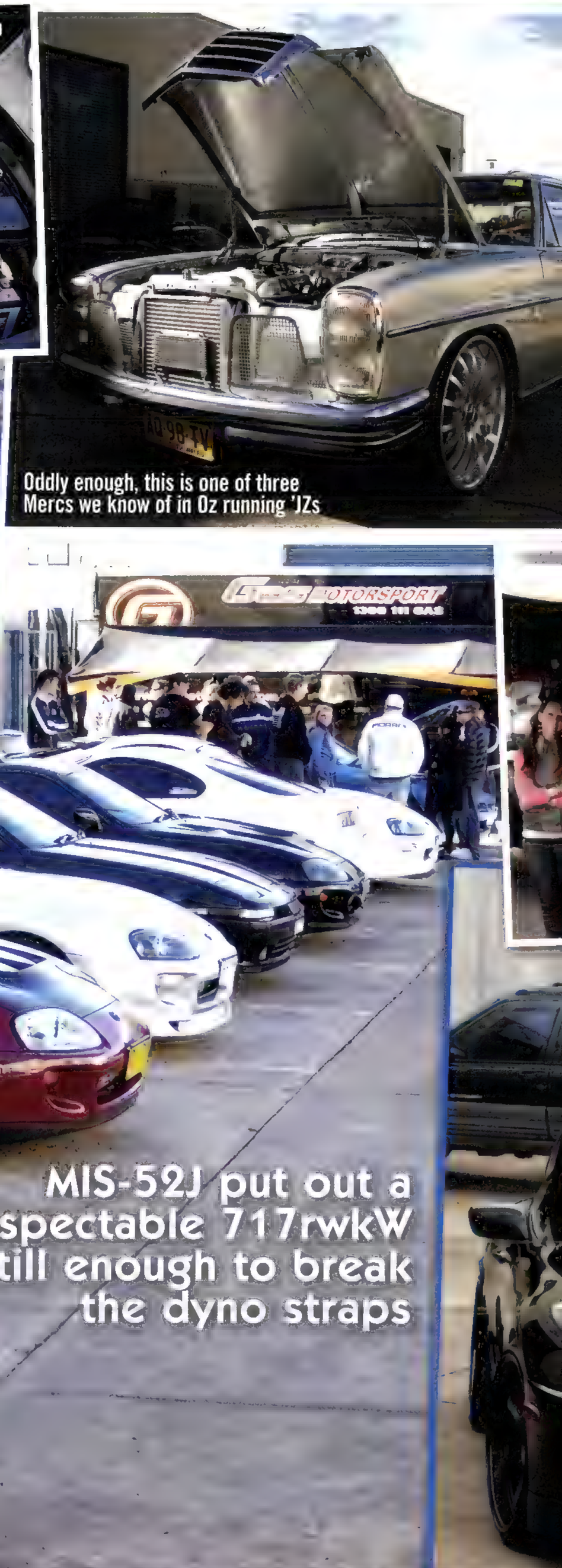
Through its extensive research and development, GAS Motorsport has become the market leader in the supply of performance engine packages in the form of 2JZ, RB26, EJ20, SR20, 13B, 20B and RB30/26 combinations. GAS also specialises in the provision of professional tuning and has over 13,000 different parts available.

The GAS Motorsport experience has led to domination of the local compact drag-racing scene, GAS winning the national championship 2006, 2007 and 2008, smashing the Australian record no less than nine times.

On 26 February 2010, GAS made history with the world's fastest Sport Compact side by side pass down the quarter mile at WSID with the fastest car recording 6.504@350.64km/h. Head to www.gasmotorsport.com.au for more info.

While a lot of punters seemed to place in the 200–300rwkW range, there were a couple pushing well past





Oddly enough, this is one of three Mercs we know of in Oz running 'JZs

MIS-52J put out a respectable 717rwkW – still enough to break the dyno straps

Well known on JDMST, Gorilla's MkIV has recently come in for more engine work. Look for a feature soon

NSW SUPRA CLUB

Formed as a social club, the Club provides benefits to its members through the organisation of regular club-sponsored events, cruises and sponsorships. The Club is proud of its sponsors, which include GAS Motorsport, Shannons, Top Secret Imports, Marulan Driver Training Centre, Unique Automotive and Gorilla Industries. Since its inception in 2001, the Club has grown and now has over 100 active members.

Refer to www.supra.org.au for further information on the NSW Supra Club. The club also interacts and holds combined events with its sister clubs: the ACT Supra Club (www.actsupraclub.com) and the Queensland Supra Club (www.qldsupraclub.com).

Supra show car and the triple world record holder copper Celica drag car. But for most, it was serious business. There were a few old scores to settle from last year as club members would battle it out to prove who had the most powerful machines for ultimate glory.

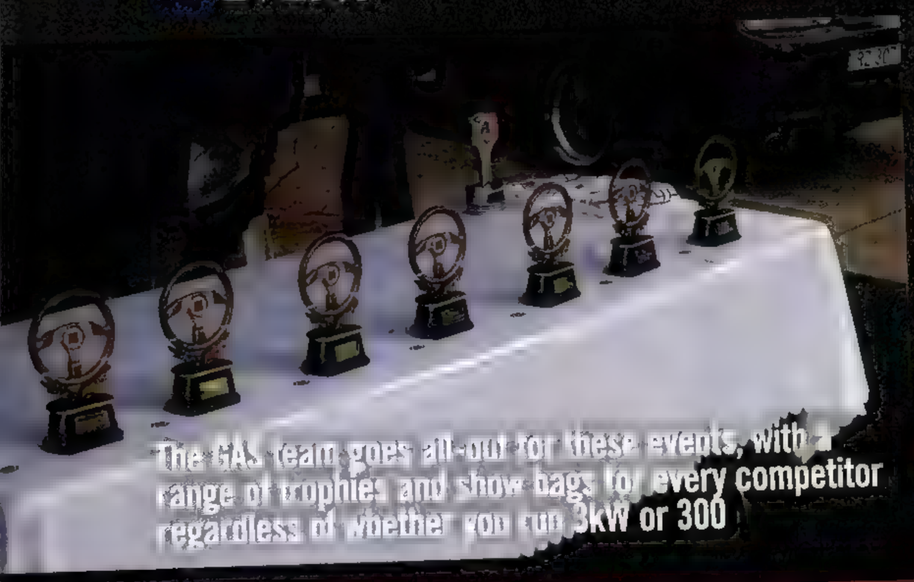
This year marked the return of some of the club's best JZA70s, with Andrew Linton's (JZA70T) MkIII putting out 383rwkW. Club cars included the awesome 1250hp MIS-52J, owned by Jodi Toneguzzi, the beautifully presented AH-111 owned by club VP Andrew Hall and Shane Standley's (?uestlove) tough track Supra. The day was also attended by the club's youngest member at 15 years of age – Anthony Galea, who participated with his N/A Supra on the dyno with the support of his dad, earning him an encouragement award on the day.

The day commenced early – 7am, with the early birds greeted by the full GAS team on arrival. Proprietors Joe Signorelli and Gary Goodman set to work immediately rolling on and off all member's cars. What really was impressive from the outset was the level of organisation and professionalism display by Gary and Joe, and the entire GAS Motorsport team.

Mistaken identity?

The battle for N/A 'Supramacy' was hard fought. It really is a case of 'every kilowatt counts'

The GAS MkIV, having taken home the gong for most powerful in the past, wasn't at full steam, posting in the 400s



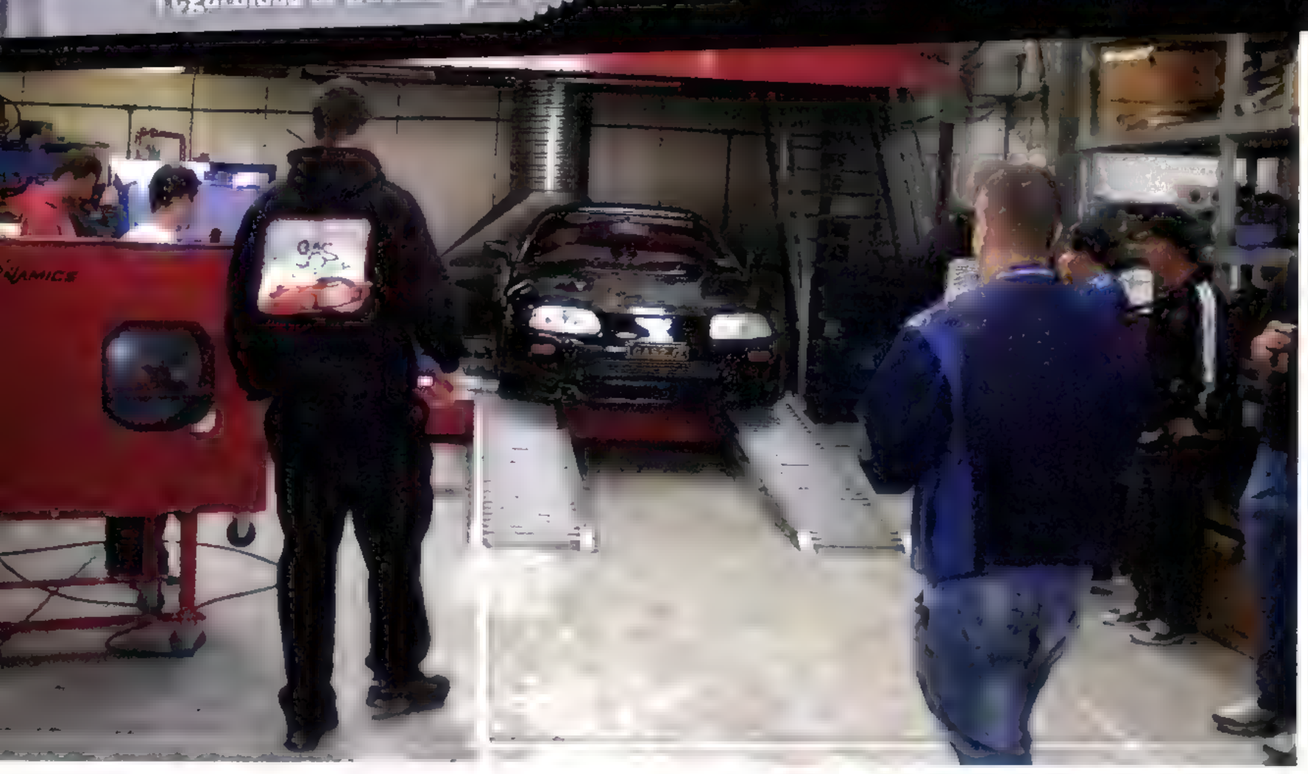
The GAS team goes all-out for these events, with a range of trophies and show bags for every competitor regardless of whether you run 3kW or 300

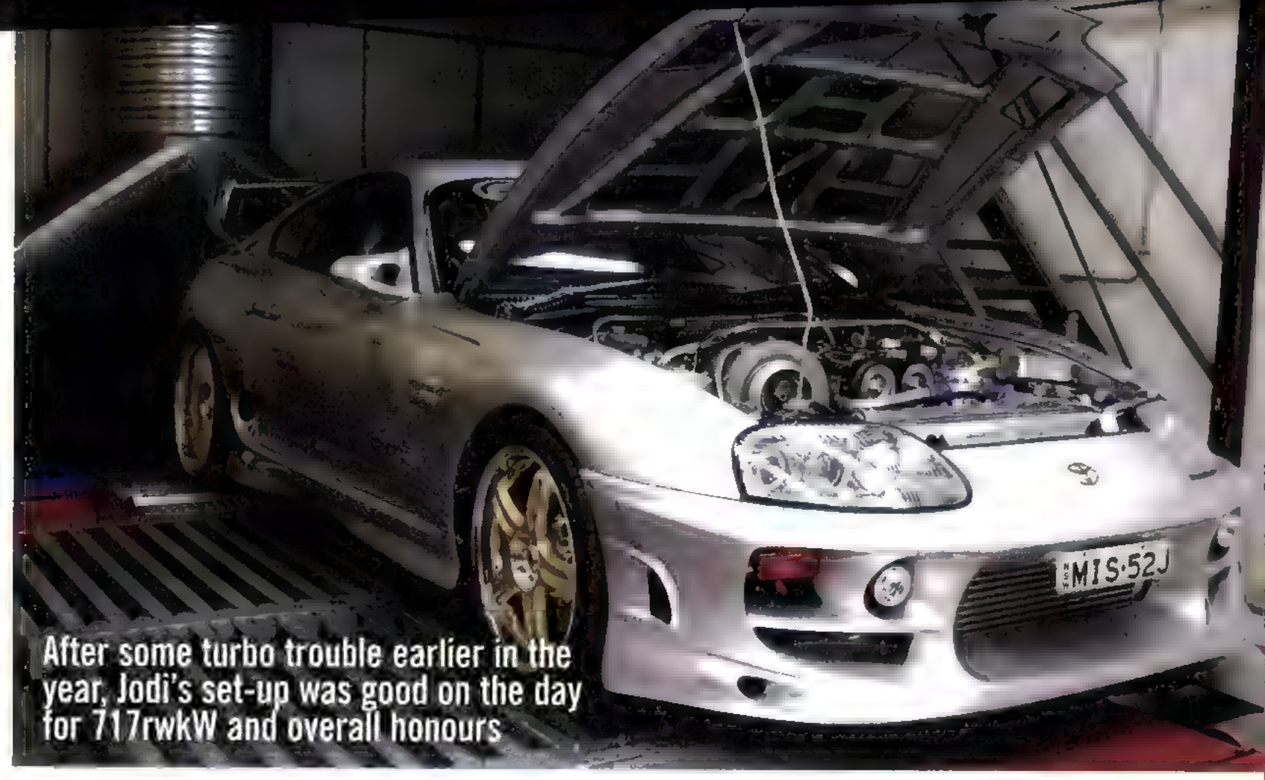
RESULTS

Highest overall Supra of the day	MIS-52J	717rwkW
Highest single-turbo MkIV Supra	Fabio	355rwkW
Highest twin-turbo MkIV Supra	Menah	274rwkW
Highest N/A MkIV Supra	Erkan	138rwkW
Highest MkIII Supra	JZA70T	384rwkW
Best-looking Supra overall	?uestlove	n/a
Best-looking engine bay	Hally	n/a

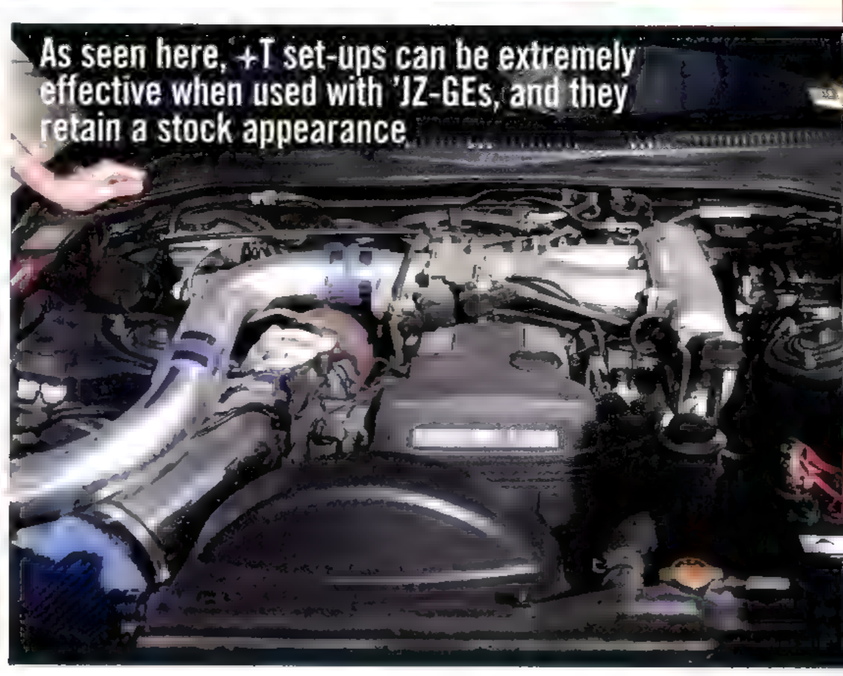
STOP PRESS!

If you're keen to check out the next GAS Motorsport Supra Dyno Day yourself, you're in luck, as the guys have pegged the next annual event for the 13 March, 2011. Keep an eye on both www.supra.org.au and www.gasmotorsport.com.au for full details.





After some turbo trouble earlier in the year, Jodi's set-up was good on the day for 717rwkW and overall honours



As seen here, +T set-ups can be extremely effective when used with 'JZ-GEs, and they retain a stock appearance

This year marked the return of some of the club's best JZA70s, with Andrew Linton's (JZA70T) MkIII putting out 383rwkW

The GAS premises were open for all on the day, also allowing punters a close-up of the company's record-breaking Toyota Celica drag car

The GAS Motorsport team tested more than 40 Supras on the day. MIS-52J put out a respectable 717rwkW, which was well below normal power output owing to a late swap-over of turbos, but still enough to break the dyno straps!

The most hotly contested category was for the N/As, with the late entry of Erkan Guden producing 138rwkW to take out the prize money. The Highest Twin Turbo category was won by Arial Al Sundrial (Menah), winning by just 1.4rwkW over Ashley Kmiec (Ash2jz-ge). The club was also treated to the testing of the GAS Motorsport 2JZ show car.

The GAS Motorsport team arranged performance segment competitions with trophies and prizes for those at the top of their class. The GAS team also provided a little something extra for everyone in the form of show bags packed with official merchandise and goodies, and threw on a BBQ for all NSW Supra Club members and their guests. Proprietor Gary also took on BBQ responsibilities to ensure that the steaks and snags were cooked just right.

This was a very special day and one that was thoroughly enjoyed by all that attended. Congratulations to the winners. «

SUBSCRIPTION OFFERS

A MUST FOR ALL PERFORMANCE FANS!

Whether you're a fan of old-school, turbocharged street muscle or late model, hi-tech quarter-mile machinery, Zoom has it covered. The hands-on Zoom team lives by the 'The magazine that puts GO before show' mantra so when it comes to super-fast street and race cars that put performance first, Zoom Magazine is where it's at. Zoom's in-depth DIY and technical content, hard-core feature cars and motorsport event coverage make it a must-have for any car-fan who values horsepower and performance above all else.

Zoom – The magazine that puts 'go' before 'show'!

OFFER 1
SAVE $39
10 ISSUES FOR ONLY $60.50
Offer Expires 4-03-11

OFFER 2
SAVE $62.55
15 ISSUES FOR ONLY $86.70
Offer Expires 4-03-11

SAVE A FURTHER 10% OFF THESE PRICES IF YOU ORDER BEFORE 25-02-11

TAKE ADVANTAGE OF THIS OFFER NOW!

FREE POST	FREECALL	FAX	EMAIL
Express Publications Reply Paid 60698 Silverwater NSW 1811	1800 801 647	(02) 9737 8017	subs@magstore.com.au

Please select your preferred Offer & appropriate Price.		Offer code	Offer	(a)	Discounted Price	(b)	Discounted Price Less 10%
☐	Offer 1.	HP206	10 issues of ***Zoom***	☐	*$60.50* ***(SAVE $39.00)***	☐	*$54.45* ***(SAVE $45.05)***
☐	Offer 2.	HP207	15 issues of ***Zoom***	☐	*$86.70* ***(SAVE $62.55)***	☐	*$78.03* ***(SAVE $71.22)***

(NOTE: Additional 10% is ONLY available to those who are ordering on or before February 25, 2011.

(PLEASE COMPLETE IN BLOCK LETTERS) *Denotes mandatory field

Name*: Mr/Mrs/Ms/Miss

Address*:

Suburb*: State*: Postcode*:

Daytime Contact No.*: Phone (H)*: Phone (W):

Email:

EASY PAYMENT OPTIONS

1. Please debit my: ☐ Visa ☐ MasterCard ☐ Amex ☐ Diners

Card Number: ☐☐☐☐ / ☐☐☐☐ / ☐☐☐☐ / ☐☐☐☐

Expiry Date: ☐☐ / ☐☐

Name on Card: Signature:

2. Cheque/Money order for $ is enclosed payable to Express Publications Pty Ltd ABN 96 057 807 904

Offer expires **March 4, 2011**. Prices include GST. Subscriptions will commence with the first available issue. Existing subscriptions will simply be extended. If your order is cancelled before all issues are received, payment will be pro-rated over the total number of issues available as part of the offer for the purpose of calculating any refund due. All cancelled subscription orders will incur a $20 Administration Fee for the processing of refunds. **PLEASE NOTE:** Free gifts are usually dispatched immediately and arrive separate to the magazine subscription, however please allow up to 6 - 8 weeks for delivery depending on location. Offer/s open to Australian residents only. OS residents will incur additional postage costs based on postage rates issued by Australia Post.

Six shooter

At last, the Nissan V36 sedan arrives in Australia, and it's hard to be a hater...

Words: Tom Jakovljevic Pics: Corbin Hurst

On the top-line SP, 19s come standard. Ride quality was good for a model designed for pancake-flat J roads

The name Skyline had, for a long time, been linked to an outstanding line of Nissan performance coupes and sedans. The recipe was simple – good chassis, good powerplants and, with the GT-R as the hero car, worldwide recognition.

Come the late 1990s, though, times were changing. Nissan was now run by Renault, economies of scale were getting smaller and emissions rules were becoming tighter and tighter. Thus, in 2002, with the end of the R34 model, Nissan went in an entirely new direction.

No longer was the Skyline primarily a performance car. The 'purists' were shocked at what Nissan had delivered in its place... namely a massive transplant of refinement and luxury.

The V35 (named V due to the V6 engines now powering them) was an outstanding first try by Nissan, and the few years of feedback turned into knowledge that Nissan then transferred into delivering the next model – the V36 Skyline.

These were sold in Japan to the domestic market, and to America as the Infiniti, and the intention was clear. Japan had set its sights on Europe's best sedans and was out for blood.

Thanks to David and the team at Fabcar in Perth, who stand true to their motto of "drive something different", we can welcome the newest member of the Skyline family, the V36 four-door, to the SEVS list. For a lucky few hours one freezing morning, PI had the privilege of exploring the KV36 sedan.

As all things Nissan, there are usually a few variants in the model line. Mechanically, all models are the same, with the differences coming down to trim and accessories. The base model is the 370GT, which then steps into the Type P – same as 370GT base model but with heated leather interior and an adaptive steering wheel and door mirror position system (moves with the driver's seat position to improve rear vision).

The next model in the range is the Type S – no heated leather or mirror system but comes with Nissan's four-wheel active steering (4WAS) system. This adjusts the steering-linked angles of front and rear wheels according to speed, making the vehicle more responsive to the driver at low and medium speeds, and stable and smooth during higher speeds. It also got a 19in wheel and tyre package (225/45R19 front, 245/40R19 rear), sports-tuned suspension and aluminium pedals.

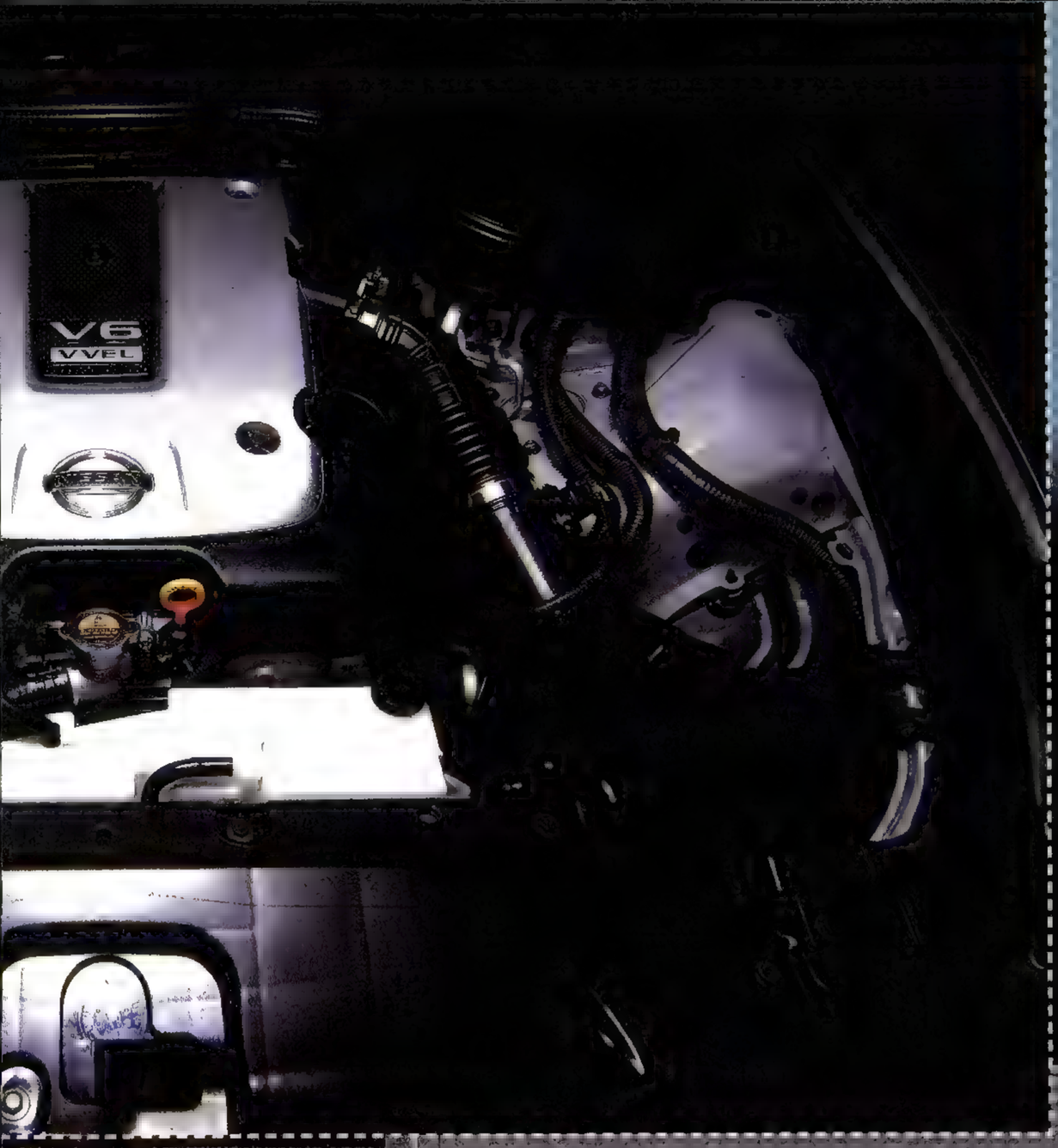
Finally, the top-of-the-range model is the Type SP, which has the sport suspension, wheel package, 4WS and the leather and mirror package of the Type P. Confusing enough? Almost! Our test vehicle for the morning was an immaculate low-kilometre Type SP.

This car is the car the V35 should have been, the 3.5L V6 makes way for a 3.7L V6 producing 245kW and is happy to rev all the way to 7500rpm. Codenamed the VQ37VHR, it is not the same 3.7L Nissan motor that powers the R35 GT-R. What it is, however, is incredibly smooth and quiet at idle, changing to a mean growl to accompany the burying of your right foot.

Twin intakes mean more induction and a greater growl both up front and out the bum over the VQ35

With modern lines, the V36 has a high-end Euro feel about it, especially at the rear end

Without having to worry about lag or changing gears it will get you to licence-losing speeds far quicker than you would assume



In a very KITT way, the wheel and seats retract to make getting in and out easier

ADVANTAGES

- Every gadget and mod-con you could want
- Super-smooth seven-speed and torquey 3.7L
- Extremely practical thanks to generous seating and storage

DISADVANTAGES

- Two-pot calipers not built for extreme usage
- No manual option

Traction and stability control keeps things nicely in check, but can be fully switched off should you hit the track for some fun. Pushing around 1550kg, the seven (yes, you read right, seven) ratios virtually guarantee you will never be left wanting for the right gear.

In the sedan, there is no manual option, and for some this may be an issue. To compensate, Nissan has given drivers paddle shifters and downshift rev-matching in sports mode, which actually makes spirited driving a rewarding experience.

While the character of the modern Skyline may not entirely mimic its older siblings, the performance certainly does. It will sprint to 100 in the low 6sec range, and without having to worry about lag or changing gears it will get you to licence-losing speeds far quicker than you would assume.

Ride is superb, better than some of those famous names from Europe. Even though the Nissan engineers never visited Australia or designed the suspension to suit our conditions, the Skyline took everything thrown at it and soaked it up with ease.

Handling is not quite Mitsubishi Evolution-beating, but it was never designed to be. It is, however, a well-balanced car that responded well to driver inputs and showed no nasty surprises, which inspires confidence. With some aftermarket pieces it would be quite a competent handler.

Brakes are more than adequate, and we did give them a few tests. Initial bite is strong, feel is smooth and progressive, and the ABS does a great job of assisting the driver should they need it. Unlike the coupe, though, they are only two-pot calipers, and while it is unlikely that the sedan is going to be used as a basis for a track car, heavy use would warrant an upgrade.

The interior is truly an awesome place to slide into, and a massive step up over the V35. The biggest difference is the improved rear-view vision compared to the older model. This is a car you can now park with confidence, and to further help out, rear-view and side-mirror cameras are standard fitment.

Seats are a 10/10. They are comfortable yet supportive, even for someone of, ahem, 'stature'. Given the fact that the morning of the shoot was a 1°C day, the added bonus of heated front seats was certainly appreciated.

Depending on model of car you buy, the steering wheel and seats will also automatically retract, making ingress and exit easier for the driver. Rear seats are also accommodating to most, with plenty of legroom, meaning five adults could be transported comfortably.

Speaking of transporting things, Nissan also ensured you could bring shopping home in the boot of the Skyline. It is roomy, and its access system deserves applaud. Simply be near the car with your key, tap the button located in the tail-light, and you're in.

This is all topped off with all the possible gadgets you could want, including an inbuilt hard drive to load music onto to save carrying disc s around the car. All the information is displayed via the LCD, which also doubles as the viewing screen for the reversing and parking cameras. Safety is also paramount, with the car excelling in crash-testing in Japan, with airbags for driver and passenger, naturally.

While some purists kicked and screamed about the lack of the straight-six RB series of engines and lack of turbos, Nissan simply got on with the task of developing a car that could mix it with Europe and the world's best. Like usual, they have not failed to deliver.

For a mixture of style, looks, performance and practicality that very few can match without spending half a house payment, a V36 four-door is a seriously wise choice. Once again, we would like to thank the team at Fabcar, who were most accommodating in getting the car to us for a close look. ««

VITALS

MODEL: 370GT sedan SP (DBA-KV36)
ENGINE: 3696cc VQ37VHR six-cylinder
DRIVE: RWD
POWER: 240kW/330hp@7000rpm
TORQUE: 361Nm(266lb.ft)@5200rpm
TRANSMISSION: Seven-speed automatic
DIMENSIONS: 4750x1773x1453mm

We tested out the V36 Coupe in issue 108. Even with the extra weight, the sedan felt just as punchy

Minor to major services
All mechanical repairs
Engine and Half cuts
Performance parts
New & Used parts
Logbook servicing
Engine conversion
Suspension mods
CWest Bodykits
JDM parts
ONE STOP
PERFORMANCE
SHOP
13/15 Winchcombe Court
MITCHELL ACT 2911
02 6162 4077
info@ JAPSPEC GARAGE.com

DON'T DRIVE HER WITHOUT PROTECTION!
ONLY $49.95 per roll
PROTECT YOUR PRECIOUS CAR WITH THIS REVOLUTIONARY CLEAR PLASTIC FILM. EASY TO PUT ON AND SIMPLY PEELS OFF LEAVING ABSOLUTELY NO RESIDUE OR MARKS. DRIVE DISTANCES WITHOUT THE HASSLE OF CLEANING ROAD GRIME AND BUGS OFF THE FRONT OF YOUR CAR. EACH ROLL DOES THE AVERAGE CAR AT LEAST SIX TIMES SO IT'S GREAT VALUE FOR MONEY.
STREET WRAP
WHEN IT COMES TO EXTERIOR CAR PROTECTION WE'VE GOT YOU COVERED!
DO IT YOURSELF
BUY ONLINE AT:
www.streetwrap.com.au
OR
SMS 'Street Wrap' TO 0419 771 277
FOR MORE INFORMATION
Street Wrap can also be used for trucks, 4WDs, vans, boats, motorhomes, caravans and motorcycles.
PROMO CODE: 18102

LINKED IN

A true lab of genius, we tour ECU manufacturer Link New Zealand

The facility boasts a four-car workshop, 4WD dyno, stationary engine dyno and parking for 26 cars

This well-modified RX-7 was in for R&D work on the day we toured

Every product is tested thoroughly before being released

Link is a name synonymous with quality ECUs. A lot of readers might not realise they're based in New Zealand, nor that they operate out of a facility fit for an evil scientist. They've consistently been at the cutting edge of technology, and their latest products reflect this, whether it be the popular KnockBlock right up to the G4 systems.

To find out more, we had a chin-wag with Philip Royd, Link's main man:

PERFORMANCE IMPORTS: Hi Philip. Firstly, why should consumers choose Link products over the countless other ECUs on the market?

LINK: Our systems are completely different, the result of our unique home market. NZ has a huge variety of cars and a cost-conscious market, so we have to be flexible.

G4 ECUs use a dedicated powerful engine management microprocessor. Other manufacturers use a generic processor. Generic processors are cheaper, but do not have the special capabilities required for running an engine precisely at high speed, and the result is often evident in the form of unstable ignition timing and unrepeatable tuning.

Our processor has the capabilities to control fuel and ignition with extreme accuracy at the same time as controlling variable valve timing, electronic throttles, knock control and variety of other critical features. Generic processors just do not have the power to do all this at the same time. As we say, "Cars drive better on G4".

Our tuning system is easier for the end user, meaning that the tuner is able to refine the set-up further in the available time.

We only sell G4 ECUs and they all run the same internal programme (firmware) and microprocessor. Most of our competitors offer old systems as their entry-level ECUs along with all the problems and limitations. In short:

A) Plug-in ECUs fit inside the factory enclosure and include a base map.

B) PCLink, the tuning software, is dynamic and only displays information relative to the ECU and engine, ie. if using our G4 Atom, the PCLink tuning software reconfigures to the Atom, only displaying relevant information.

C) 'Right click' help within PCLink goes straight to the relevant page rather than wading through 600 pages of information.

D) Our logging software is built into PCLink rather than running as a second programme. This means that the tuner/racer not only sees what has happened, but can view it within the relative part of the tune. No secrets, no confusion.

E) We bundle high-end features like e-throttle and closed-loop knock if you add the right hardware. Others charge for it, but ours actually works! Hold us to it, expect no less.

We recognise that it is very hard to tell the difference between all the ECUs available as many claims are made. A Link G4 will redefine your expectations. We recommend that you talk to any G4 user. They are our best advertising.

PI: What has been Link's involvement with motor-sport, both locally and abroad?

L: Traditionally, we were into jet boating and rallying, as that was our NZ market's passion. We sponsor one leading rally EVO IX in NZ. Now it seems that drifting and drag-racing are the highest profile. Flat track (circuit) racers buy the most ECUs.

Locally, we have a lot of fun at the local strip, but readers would laugh at its 'country feel'.

Our GT-R circuit car has won every race it has competed in except the last street sprint where we broke a shaft, so didn't get the trophy five years running.

»PROFILE

We sponsor and compete in the new NZ 'Link Super Touring Car' series but will have to battle hard for a win. The ProRX7 class runs Link ECUs as their control ECU.

We are a major sponsor for the RIPS FED 7.26sec rail running a RB26 and hoping to be the world's fastest RB-powered soon and get into the 6sec bracket with its G4 Xtreme.

In Australia, we sponsor the Jeff Watson/Ben Diggles FJ20 Rail, which is running low sevens on an G4 Xtreme.

There are a huge number of other competition cars that we work with, and they constantly push us for new developments and the feedback is welcomed.

PI: Why exactly is the Link G4 Xtreme the 'best ECU on the market'?

L: We make this claim because that is the constant message we hear from those that work with it.

That is, best packaging, mounting, loom, feature set, reliability, support, accuracy, cam control, e-throttle, closed loop boost, tuning software, integrated help manual, idle control...

PI: What advantage does G4 closed-loop boost control have over competitor boost control systems?

L: In most cases, tuners don't use competitors' closed-loop systems, as they are difficult to set up, even on the most expensive ECUs. The G4 closed-loop boost control system is the only system to separate the boost control into three separate stages. Each stage has a separate method of control associated with it:

Stage 1 – Pre-spool – The turbo is spooled as fast as possible.

Stage 2 – Approach Target – Fast approach without over-shooting the target.

Stage 3 – Hold Target – The target is locked and maintained.

As with the existing boost control, there are five dimensions of corrections that can be individually activated to suit the vehicle's application, eg. lower boost when the engine is warming up or extra boost in third, fourth and fifth gear.

PI: What options does Link have available for owners looking for a plug-in ECU solution?

L: Link offers G4 plug-in solutions for Holden, Honda, Mazda, Mitsubishi, Nissan, Subaru and Toyota.

These plug-in solutions have all the features of the wire-in G4 including full motorsport and knock control features. The benefit of these ECUs is that they fit discreetly inside the original factory enclosure. There is an additional XS connector on-board for options like oil pressure, logging switch and anti-lag control if desired.

PI: How does PCLink differ from other ECU software systems?

L: G4 PCLink is much more powerful than other tuning packages. It has many advanced tuning features designed to reduce tuning time and is highly configurable to allow the tuner to alter the way it looks to best suit their tuning style. PCLink includes a full data-log analysis package.

Some of PCLink's advanced tuning features include QuickTune automated fuel tuning, QuickTrim pre-calculated table adjustments, powerful fast table editing features and the ability to display and edit any number of tables and settings all at the same time.

Other manufacturers separate tuning and logging into different software, meaning the tuner has to switch back and forwards between programs. PCLink allows the tuner to log a power run then instantly view it and analyse it in the same program alongside tuning tables and even overlay it to compare with previous logs. PCLink also allows viewing of log files recorded in the ECU's internal memory for analysis and comparison of race laps and drag runs.

As a comparison, most tuning software does not even allow tuning of the fuel and ignition tables at the same time. PCLink can do this as well as displaying a data log alongside the tables and important critical real time data – all at the same time!

PI: Has the recent earthquake in Christchurch affected Link's business?

L: It broke $10K of windows here at the development centre and one monitor. We were very lucky.

As I write, one month later, we are still getting daily shakes that rattle the windows (two by midday today), and we have to evacuate for the blasting of unstable rock on the hills above us occasionally.

One of our engineer's houses sank and another lost cladding and virtually no one has chimneys anymore. Many streets are still closed. We feel acutely for those in our community that have business losses, a common occurrence. See news on linkecu.com for more info.

PI: Do you believe being based in NZ is an advantage or disadvantage dealing with the Australian market?

L: New Zealand offers huge advantages for Link and the Australian market. Link enjoys the advantage of the exchange rate, enabling Link to deliver a higher specification, higher quality product into Australia at a competitive price than the comparable Australian-made product.

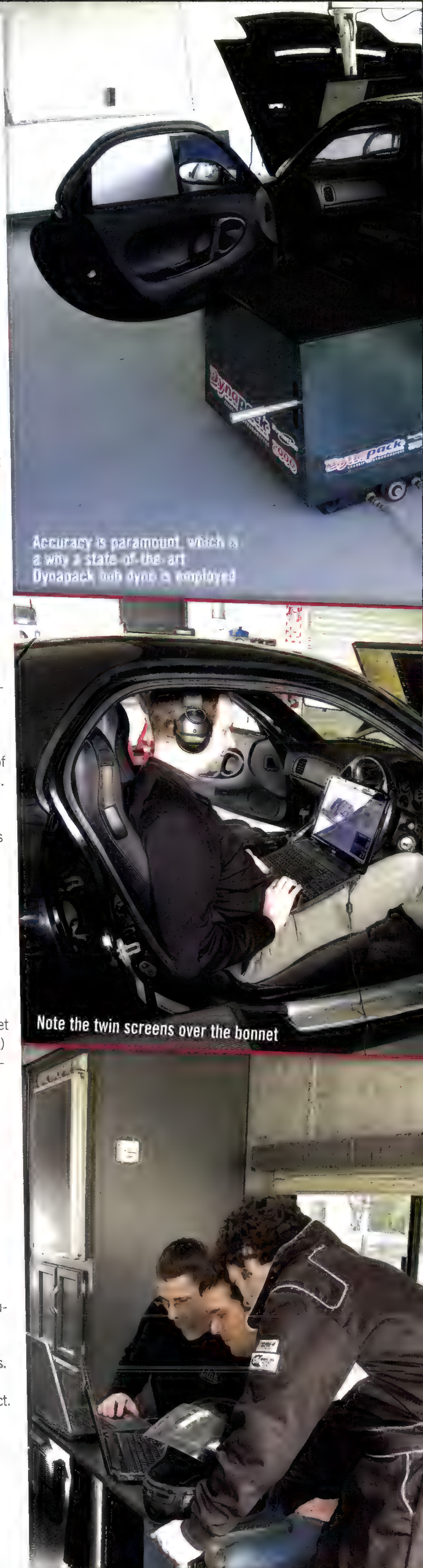
New Zealand has all the vehicles Australia has, plus a free range of JDM vehicles that Australia will never see, providing Link with an unparalleled pool of global specified vehicles to access for R&D purposes.

Due to New Zealand's relatively small domestic market, Kiwi businesses have to look off-shore for opportunities, which gives a business edge over other countries who can survive wholly off their domestic market.

PI: Quickly run as through the development process for a new product?

L: 1. Market research identifying a need in the market and completing the engineering proposal documentation.

2. If agreed, entering the project into the project management system.
3. Completing the specification for a product to meet this need in the market. (Application Engineering)
4. A financial study to see if this new product is viable (finance).
5. A technical specifications is developed and the engineering process begins.
   a. Application research and testing
   b. Hardware design
      i. component selection
      ii. looms
      iii. enclosures
      iv. PCB design
      v. environmental testing
   c. Code writing for the micros on board
   d. PCLink configured
6. The production team organises supply and manufacture of the new product.
7. Rigorous testing in our own test facilities (4WD dyno), then beta testing by our experienced dealers.
8. The marketing department then prepares advertising material and other such things to promote the product.
9. After the product has been released, its performance is continually evaluated and changes are made in future revisions as necessary.



Note the twin screens over the bonnet

Link
FT194
A rarely seen glimpse inside a G4 reveals just how compact and well thought out the internal componentry really is
THE G4 CLOSED-LOOP BOOST CONTROL SYSTEM IS THE ONLY SYSTEM TO SEPARATE THE BOOST CONTROL INTO THREE SEPARATE STAGES
Link has a solid name in the industry for its high level of after-sales support

G4 Storm

Advanced G4 tuning features at an extremely competitive price

linkecu.com

Australia 07 4755 0000 NZ 03 348 8854

There are quite a number of 'imports' owned by staff, including highly modified FDs, Silvias and Skylines

Now that's our kind of R&D!

PI: What sort of aftermarket support can Link customers expect?
L: Through Link's dealer network, the end consumer can expect a high level of competent support across the full range of the Link brand. Dealers enjoy full tech support over the phone or via Link's special dealer-only forums. Link fully supports all its product right back to the G1 series of ECUs and provides full service, maintenance and upgrades accordingly.

PI: What advice would you give readers who are looking into an occupation in the tuning industry?
L: Have a passion for cars and a lifelong willingness to learn. Work alongside a respected tuner (even in the evenings/weekends) and have a hunger for knowledge. Understand engines and gain experience modifying them.

Fit an ECU (preferably a G4) to your own vehicle and get familiar with it. Attend a training course like EFI101. Spend time in the pits at meetings and use your ears, not mouth, except to seek clarification.

PI: Is 'remote tuning' becoming more popular within the industry?
L: Yes, with great success.

PI: What kind of cars do the staff drive?
L: Most of the team have turbocharged vehicles fitted with either the appropriate plug-in or wire-in Link product. Their passion for the Link brand is reflected by their constant push to improve through their own playing discovery. Staff who are involved in motorsport also use Link product passionately.

PI: What benefits does the KnockBlock offer?
L: When tuning for peak performance, the limiting factor is often knock – engines are pushed right to this limit. Increasing temperatures, poor fuel quality and several other situations can bring forward the onset of knock.

The KnockBlock offers precision digital measurement of engine knock and provides this information to the ECU as well as headphones for the tuner and a warning light. The ECU then can adjust individual cylinder timing in real time based on measured knock, saving the engine from severe damage and maximising power.

PI: Run us through the facilities at Link:
L: Link has a four-car workshop, 4WD dyno, stationary engine dyno and parking for 26 cars.

We do no chargeable work, as the facility is for R&D only.

Our large development centre is over three floors with windows on all sides and a large deck/staff cafe on top. Link is an R&D firm, with a large engineering department that does all in-house firmware, hardware and software development.

Product is manufactured externally by a large local contract manufacturer with full X-ray, optical and probe-testing facilities.

PI: What can we expect from Link in 2011?
L: More plug-ins for late model cars. New PCLink and ECU features.

PI: We know you're a busy guy, Phil, so thanks for your time. Check out more of Link via the website at www.linkecu.com.

CONTACT
LINK ELECTROSYSTEMS
1 Bridle Path Road, Heathcote Valley
Christchurch 8022 NZ
Web: www.linkecu.com
(07) 3102 3889 – Brisbane, Australia
(03) 9018 5294 – Melbourne, Australia
(02) 8011 4941 – Sydney, Australia

SUBSCRIPTION OFFERS

A MUST FOR ALL HOT4s FANS!

Around since 1991, Hot4s magazine could either be seen as a collection of photos and words from the infamous lifestyle, or conversely, an important 21st century archive documenting the culture, cars, and events of the modified car scene. Representing the colourful diversity of Australia's custom car culture by featuring insane 4-cylinder cars, the ever evolving nature of the Hot4s scene is to simply showcase what's hot right now.

So, what are you hot4?

OFFER 1
SAVE $39
10 ISSUES FOR ONLY $60.50
Offer Expires 4-03-11

OFFER 2
SAVE $62.55
15 ISSUES FOR ONLY $86.70
Offer Expires 4-03-11

SAVE A FURTHER 10% OFF THESE PRICES IF YOU ORDER BEFORE 25-02-11

TAKE ADVANTAGE OF THIS OFFER NOW!

FREE POST	FREECALL	FAX	EMAIL
Express Publications Reply Paid 60698 Silverwater NSW 1811	1800 801 647	(02) 9737 8017	subs@magstore.com.au

Please select your preferred Offer & appropriate Price.		Offer code	Offer	(a)	Discounted Price	(b)	Discounted Price Less 10%
☐	Offer 1.	HP202	10 issues of ***Hot4s***	☐	*$60.50* ***(SAVE $39.00)***	☐	*$54.45* ***(SAVE $45.05)***
☐	Offer 2.	HP203	15 issues of ***Hot4s***	☐	*$86.70* ***(SAVE $62.55)***	☐	*$78.03* ***(SAVE $71.22)***

(NOTE: Additional 10% is ONLY available to those who are ordering on or before February 25, 2011.

(PLEASE COMPLETE IN BLOCK LETTERS) *Denotes mandatory field

Name*: Mr/Mrs/Ms/Miss

Address*:

Suburb*: State*: Postcode*:

Daytime Contact No.*: Phone (H)*: Phone (W):

Email:

EASY PAYMENT OPTIONS

1. Please debit my: ☐ Visa ☐ MasterCard ☐ Amex ☐ Diners

Card Number: ☐☐☐☐ / ☐☐☐☐ / ☐☐☐☐ / ☐☐☐☐

Expiry Date: ☐☐ / ☐☐

Name on Card: Signature:

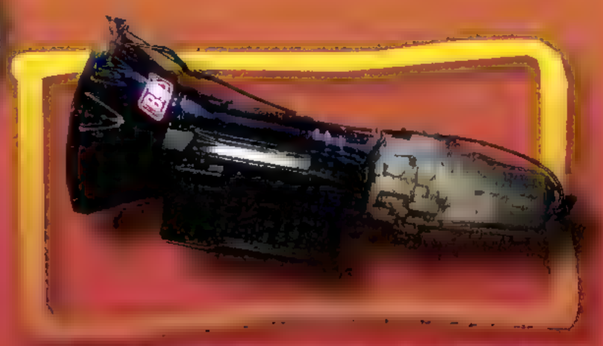
2. Cheque/Money order for $ is enclosed payable to Express Publications Pty Ltd ABN 96 057 807 904

Offer expires **March 4, 2011**. Prices include GST. Subscriptions will commence with the first available issue. Existing subscriptions will simply be extended. If your order is cancelled before all issues are received, payment will be pro-rated over the total number of issues available as part of the offer for the purpose of calculating any refund due. All cancelled subscription orders will incur a $20 Administration Fee for the processing of refunds. **PLEASE NOTE:** Free gifts are usually dispatched immediately and arrive separate to the magazine subscription, however please allow up to 6 - 8 weeks for delivery depending on location. Offer/s open to Australian residents only. OS residents will incur additional postage costs based on postage rates issued by Australia Post.

BMS
Performance Transmission Products
www.bmsproducts.com.au 02 9979 9109

DEVELOPER OF THE WORLD'S FASTEST
JATCO 4 WHEEL DRIVE AUTOMATIC GEARBOX

FASTEST STREET LEGAL R32 NISSAN SKYLINE ACHIEVING 8.93 @ 159 MPH AT WSID IN APRIL, 2010 USING BMS JATCO 4 WHEEL DRIVE TRANSMISSION.



THIS TRANSMISSION CAN BE USED IN STAGEAS, SKYLINES, NISSANS, ROTARY MAZDAS & FALCONS.

CONTACT STEVE BUTCHART ON 0414 654 327 I sales@bmsproducts.com.au I PO BOX 542, NARRABEEN 2101

BMI
BRISBANE MOTOR IMPORTS
BRISBANE'S PREMIERE IMPORTER OF JAPANESE ENGINES & PERFORMANCE ½ CUTS

ALL ENGINES ARE TESTED

WE SHIP ANYWHERE IN AUSTRALIA

SUBARU NISSAN mazda TOYOTA SUZUKI MITSUBISHI HONDA

WWW.BRISBANEMOTORIMPORTS.COM.AU
52B RANDALL ST SLACKS CREEK QLD 4127 PH: (07) 38084225 | FAX: (07) 38085221

Let 'Em Bleed

How to bleed your brakes the budget way

Words and pics: Jeremy Blackman

One of the things many PI readers tell us is that they love getting their hands dirty. While many of us have no formal training as mechanics, most have a bit of commonsense and a desire to get out there and tackle a bit of DIY. One of those things many of us look at, but have an unjustified fear of, is changing brake fluid. True, braking is something you don't want to get wrong, but changing the fluid is easier than you might think.

To first explain what we are dealing with, let's dumb it down a little. The braking system on a car is usually hydraulic, meaning when you push down on the brake pedal you are really forcing fluid within the system to push the brake caliper's pistons outwards. These pistons push the brake pads against the circular brake rotors and, through friction, slow the car.

The brake fluid system in its simplest form can be thought of as a jug of fluid at the top of the engine bay (the reservoir), with four very small lines connected to the bottom of it that fan out to the four brake calipers at each corner of the vehicle. What we aim to do, therefore, is purge these four lines of the old fluid which they contain and in the process replace the fluid in the reservoir.

The advantages of clean brake fluid over old are a more confident pedal feel and a reduction of internal corrosion of the fluid system. Most brake fluid is hygroscopic, meaning it absorbs moisture, and this reduces the fluid's effectiveness. It's therefore recommended to replace the fluid every 1–2 years. With that in mind, and with our donor R32 Skyline in place, let's begin.

BUILD YOUR OWN BRAKE BLEED KIT FOR NEXT TO NOTHING!

While there are plenty of good-quality brake bleed kits out there, we decided, in the spirit of DIY, to, well, do it ourselves.

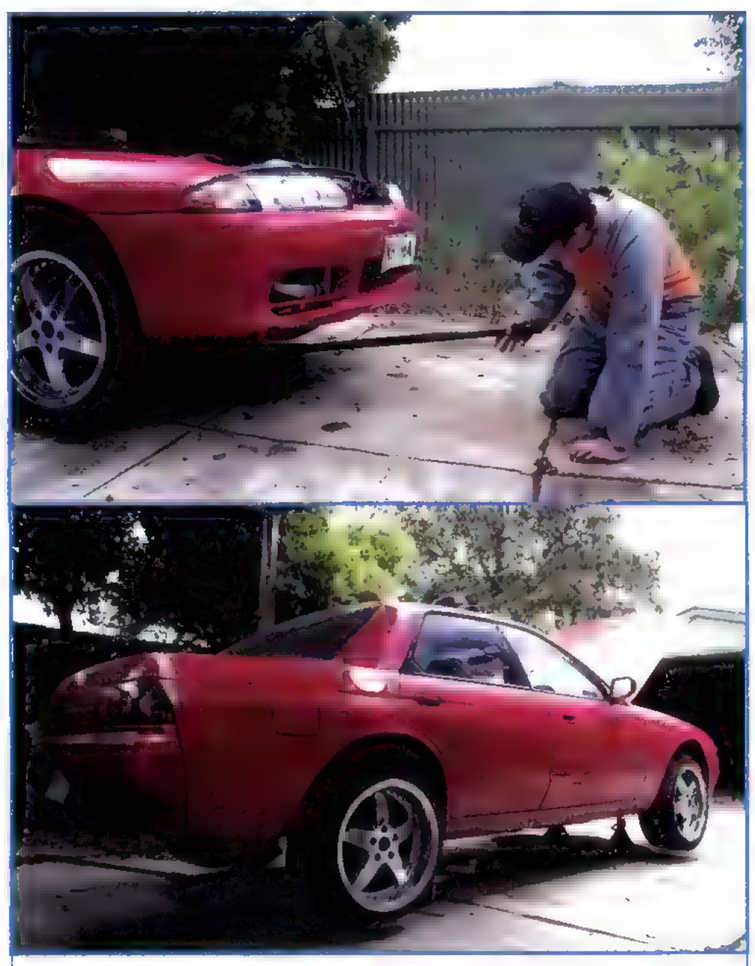
First, find a clear plastic drink bottle and, preferably, remove the label. Next, take some old wire and cable-tie it to the neck of the bottle at around its halfway point. Then get some plastic tubing that will fit over the brake caliper nipple to drain the fluid into the bottle. This should be longer than the length of the bottle and preferably clear so you can see the fluid as it drains.

The great thing about this kit is that the system doesn't need two people to work, and the kit can't fall over making a mess, as we will tie it to the vehicle itself.

Voila, and it probably cost you nothing.

STEP 1

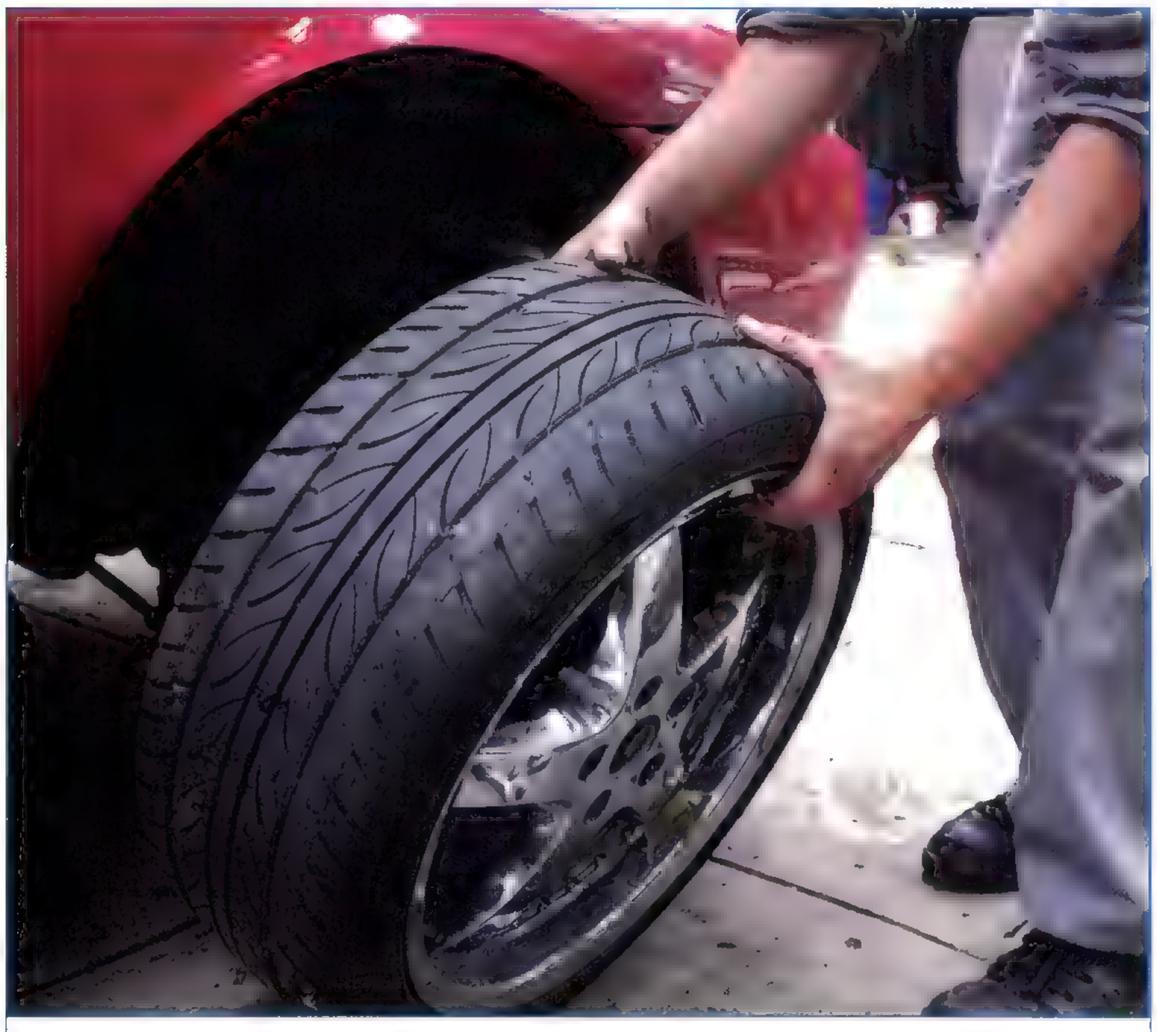
Gather all the things you will need for the job. This includes a jack, jack stands, degreaser, two 500mL unopened bottles of brake fluid, clean rags, a 10mm spanner, a ratchet or wheel brace and a brake bleed kit. The kit can be bought or, as in this example, made.



STEP 2

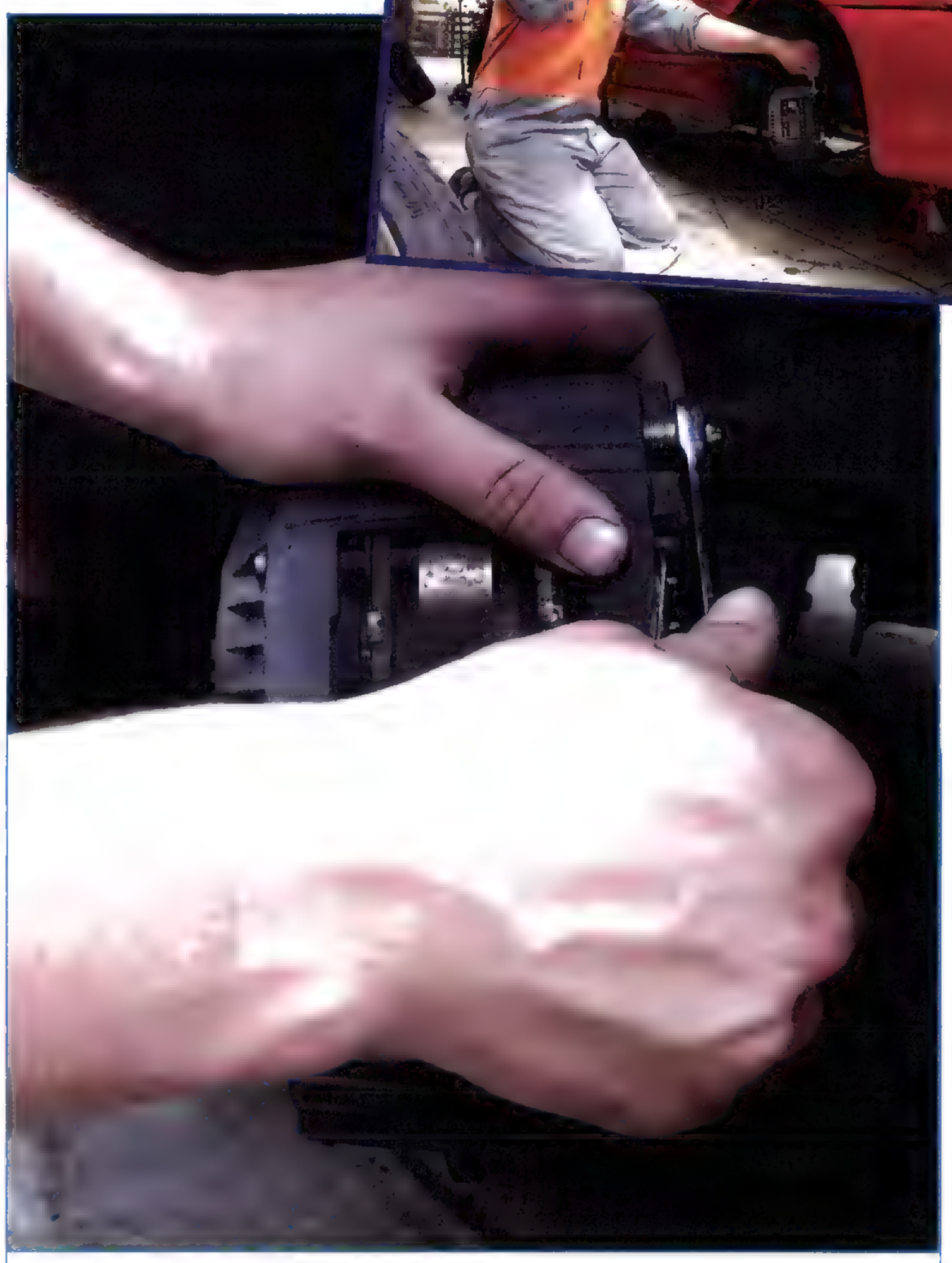
Jack up the car. You can either do this one wheel at a time, in which case you don't need the jack stands, or all at once. We decided to do this all in one go.

Before you raise the car, crack the wheel nuts loose so that the wheels will be easy to undo properly once the car is jacked up. This is done by turning each nut with the wheel brace about half a turn until they are no longer tight against the wheel.



STEP 3

Remove the rear passenger-side wheel. When changing the brake fluid on a car it's best to begin with the brake caliper that's furthest from the brake fluid reservoir and move closer step by step. This should mean, at least for the R32, it goes in the order of left rear, right rear, left front, right front. For this demonstration, we are showing the front right caliper, the final one to be bled.



STEP 4

Loosen the bleeder nipple on the caliper. Access to the right front caliper is made easier if you turn the steering wheel full lock to the right. Now locate the bleed nipple on the caliper. It should be on the wheel well side of the brakes at the top.

Remove the rubber cover and using a 10mm spanner slowly loosen the bleeder screw. Once it just breaks loose, stop turning and place the plastic tube from your bleed kit over the nipple. This has readied it for bleeding.

STEP 5

Connect the bleeder kit to the caliper. Firstly, pour a few centimetres worth of new brake fluid into the bottle from your brake bleed kit. This is to prevent air being sucked back into the system when we bleed it. Next, connect the bleed kit by tying the wire around the suspension arms or the caliper itself.

Be sure to slide the tube into the bottle so that the tube end rests on the bottom of the bottle in the fluid. Do note that while brake fluid can corrode surfaces, there is no need to panic if you spill some. Just calmly dilute and rinse away the spilled area with water.

STEP 6

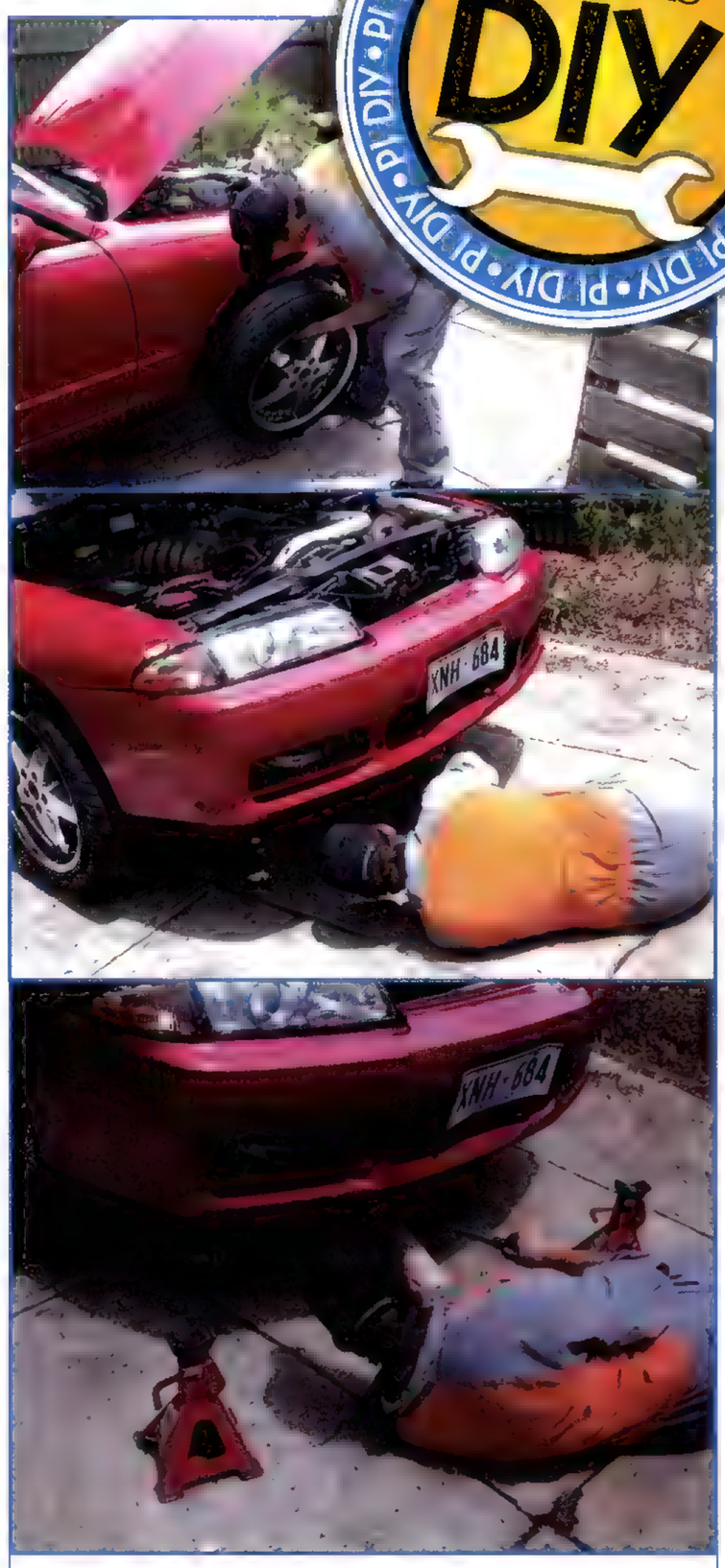
Clean the brake fluid reservoir. This step is important, as any foreign matter that enters your braking system can affect performance and is the last thing you want. Get your metho out and a clean rag, and give the reservoir a good once-over.

STEP 7

Begin bleeding the brakes. The beauty of this system is that, unlike some kits, you don't necessarily need a helper. What we are about to do is suck out the old fluid while continually topping up the system with new fluid. Firstly, get your 10mm spanner and turn the bleed screw about quarter of a turn, enough to allow fluid to be pushed out.

Then go to the brake pedal in the car and pump it 3–4 times. Now get out and check the colour of the fluid which has drained from your caliper. During this procedure, when you notice clear fluid coming from your caliper it means that the caliper is done.

While you are out of the car go and top up the brake fluid reservoir with your new brake fluid. It's important not to let the reservoir empty completely, as allowing air to enter your braking system can greatly affect the performance of your brakes. If after those four or so pumps of the brake pedal the new fluid hasn't yet made it to the caliper, continue pumping and checking slowly until it does, being sure to top up the reservoir as required.
Once you are done, remove the bleed kit, tighten up the bleed screw and replace the dust cap.



STEP 8

Bleed the other three calipers. As mentioned, start from the left rear and work towards the front right until all are bled. Be sure to do a final top-up of the brake fluid reservoir within the min–max markings on its side. Don't forget to dispose of your old and unused fluid responsibly through the services and chemical waste drop-off points provided by your local council.

STEP 9

Put the wheels back on and bask in your DIY glory. And that's it. You're done.

J-IMPORTS

Specialising in new/used OEM and Japanese aftermarket parts for
Nissan [Silvia, 180SX, Skyline], Toyota [Chaser, Supra] including:
* wheels *coilovers * seats

SSR
WWW.SSR-WHEELS.COM
nismo
TOYOTA RACING DEVELOPMENT TRD
BRIDE HOLDING MONSTER
WORK
RECARO
KICS Racing Gear
IKEYA FORMULA
HKS
CUSCO
RAYS
GANADOR
kazama AUTO
ARC

[w] www.j-imports.com.au
[e] thuy@j-imports.com.au [m] 04zz 4zz 3t4

SSS AUTOMOTIVE

High Performance Japanese Engines

ENGINES	
3SGE BEAMS RWD	NOW $2500
RB20DET 4WD SET	NOW $1000
RB25DE SET	NOW $750
RB25DET SET	NOW $2500
RB26DETT SET	NOW $4500
S14 SR20DE SET	NOW $1000
S13 SR20DET SET	NOW $1800
SR20DET suit FWD SET	NOW $1300
VH45DE	NOW $1500
VQ30DE RWD	NOW $750
VQ30DET RWD	NOW $2000
2JZGTE (ARISTO)	NOW $2800
4AGE 86Kw FWD	NOW $750
4EFTE SET	NOW $1500
4G63BT (N23W)	NOW $1200
EJ20T (94' WRX)	NOW $1200
EJ20TT	NOW $1200

HALFCUTS	
ZZT231 CELICA 2ZZGE	NOW $2000
JZZ31 1JZ VVTI SINGLE TURBO	NOW $3800
ST215 CALDINA 3SGTE	NOW $2500
GC8 WRX STI RA	NOW $3500
CD9A EVO 1 4G63BT	NOW $2800
BE5 LIBERTY EJ20TT	NOW $2500
EK CIVIC B16A	NOW $3600
DE9A FTO 6A12 MIVEC AUTO	NOW $2000

6/120 GILBA ROAD, GIRRAWEEN NSW 2145 • PH: (02) 9896 6111 • FAX: (02) 9636 1278

All prices include GST. Prices subjected to change without notice.

JUST THE NOISE OF CLOSING THE EXTREMELY FLIMSY DOOR TOOK ME BACK HALF MY LIFETIME

Pimportation

Words: Jeff Ash

On Going Back In Time

It's funny how a sound or a smell or just the action of something tactile can take you back in time. I had such an occasion last week. I was taking stock of my latest acquisition, and just the noise of closing the extremely flimsy door took me back half my lifetime.

It took me back to 1993. I had spent quite a considerable amount of time selecting my first car with my older brother Rod. We pored over normal car magazines like Wheels and Modern Motor, as it was called in those days. We got copies of all the big eastern states papers and studied the classifieds. Remember, the internets were only in their infancy.

I remember checking out a couple of bulletin boards that year, but the world was a vastly different place. You had to call people on the phone, send them a fax and then have someone on the ground to actually check the thing out. Asking for pictures would have taken you weeks rather than the minutes it can take you these days.

Now, before you go thinking that I could have picked up a minter S13 CA because it was only four years old at most, you would have been correct in saying that, but they just didn't exist in those days in Australia. The import game was only just realising that they could bring in all these amazing cars they were making in Japan. The real volume in the scene didn't happen for another four or five years. So, I was stuck with local manufacturer-delivered cars.

I had narrowed my personal list down to a few cars. An early Saab 900 Aero, having come from a family with 3 Saabs in it at that stage, seemed like a good choice, fairly quick for the day – remember, it was 1993 – safe, again 1993 and attractive, erm, yeah, not so much. My other first choice was a first-gen Laser TX3 Turbo 4x4. They were formidably quick, and to a 17-year-old me, extremely stylish.

Unfortunately, the kybosh was put on both those options by my olds, who decreed that I should not have anything turbocharged. Commence the search for something NA. I liked the MX5, but they were barely three years old, very scarce on the ground and outside my price range. The other option seriously considered was an EG Civic VTi or a first-gen CRX.

Again, they were still extremely new. If I had've stretched myself and waited for the right car, I could have gotten one. I often wonder how different my life would have turned out differently if my first car had've been a VTEC Civic. Nothing came up at the right money, and to be frank I found them a bit girly. I still do.

I was at a bit of a loose end when it came to further ideas when in the back of one of the beforementioned normal car mags there was a single page describing an odd little French car. They spoke of it being nimble and exciting, of being a handful but a rewarding driving experience. This sounded like me all over. I must have one of these Peugeot 205GTI things. So, the search began.

They were still available new those days, so we went down to Allpike Peugeot and pored over the new one they had on the floor. It was more than double what I had to spend, though. So, the search continued.

Eventually, after many weeks of reading eastern states papers, the perfect car popped up: one owner, 1989, so less than four years old, full dealer service history, sunroof and full leather. The only drama was that it was in Sydney. Fortunately, Ma and Pa were in Sydney on business, so they were despatched to investigate.

I can still remember talking to Dad about it on the phone. "I think it might be a bit quick for you, son." He knows me pretty well, the old boy. So, I bought it, sight unseen. I then had to wait excruciatingly for 10 days for it to make it across to Perth. When it arrived, I was still on my learner plates. So, basically, I learnt to drive in it, took my driving test in it and had a lot of other firsts in it, too (Don't want to know – Ed). First rollback, first handbrakie, first taste of competition, first HJ...

In the week after I passed my driving test, I took a two-day course at Wanneroo Raceway. It was the same course that the police made their pursuit drivers take at the time. In fact, most of the other drivers on the course would go on to become police pursuit drivers. I wasn't joking on the side of the road, all those times with my licence out when I said I had the same training as the guy who was writing the ticket.

"What makes you think you can drive like that?"

"Funny you should mention that, officer... No, never mind."

The following weekend I was doing the Competition Drivers course at Wanneroo.

It was the beginning of something that first year, and for about the next five I was at the track just about every weekend after that in the 205. Sprints, motorkhanas, hill-climbs, tarmac rallies, you name it.

Sadly, the many, many massively hard kilometres took their toll on poor little Pugsy. Tyres, lots of them, gearboxes and engines all got eaten. I loved that car for many years, until I was seduced by the power and the rear-wheel-drive allure of the R33 GTS25t. I sold Pugsy after many years of having him sit around and gather dust. I still kind of regret that moment.

So, here I am. Seventeen years after I got my first one, I now have another. Although, this one is hardly the prize catch the other one was all those years ago. It's done nearly 250,000km and was last used by a guy in Albany to take his dog to the beach. It's a bit of a shed, but importantly for any project car, it's all there. This time, though, I have a much better idea of what to do, and what not to do. Let the games commence...

Brisbane Compliance Centre

GTO & MITSUBISHI LEGNUM ADR 37/01 COMPLIANCE – **AVAILABLE NOW!**

MENTION THIS AD FOR A 10% DISCOUNT

PLATES AVAILABLE:
TOYOTA COROLLA LEVIN, AE101, AE111, TOYOTA PRIUS, TOYOTA SUPRA,
MITSUBISHI GTO 1996–2000, MITSUBISHI EVO 6, MITSUBISHI LEGNUM,
MITSUBISHI GALANT, NISSAN SKYLINE R32, R33, V36, FERRARI F360 1999–2005

WE HAVE A FULLY EQUIPPED WORKSHOP TO SERVICE ALL IMPORTED VEHICLES

Please phone Tony Wood 0412 167 984 **www.brisbanecompliancecentre.com**

PZP

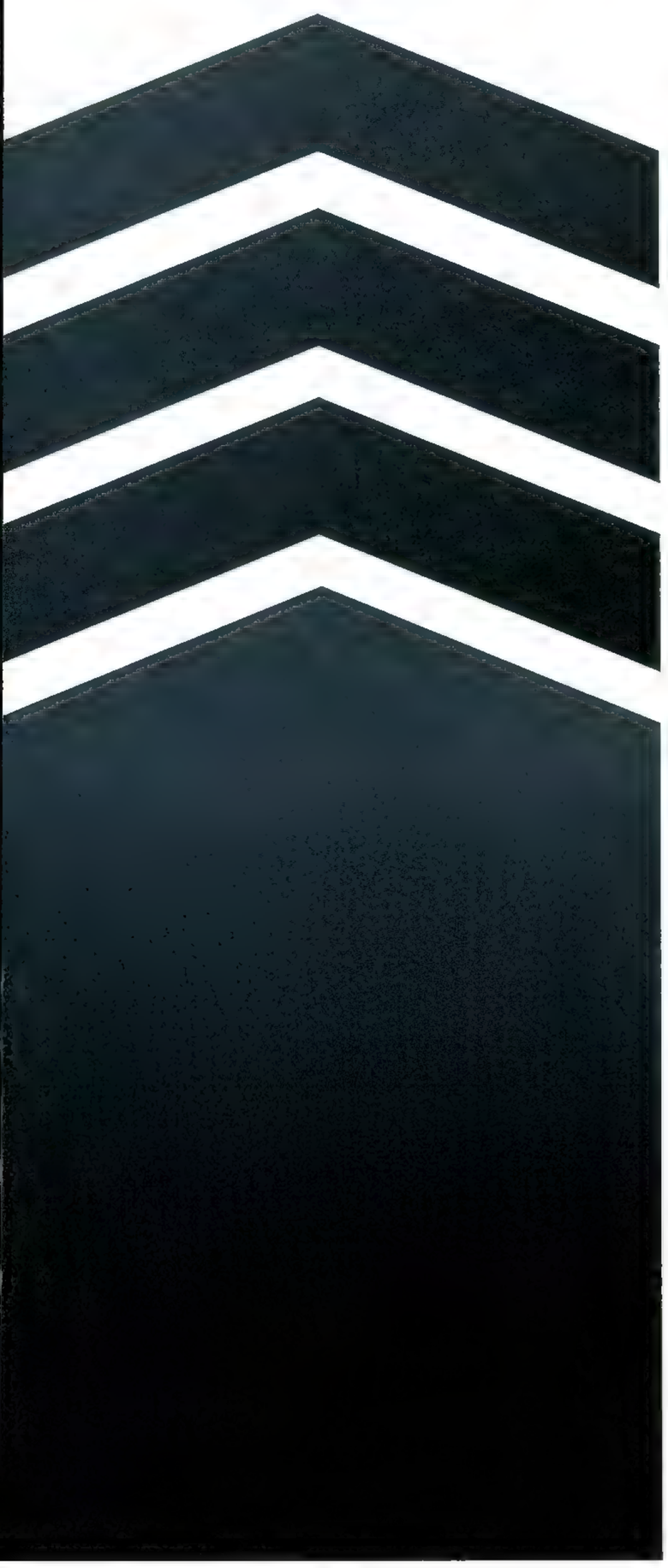
JDM SPECIALISTS

Unit 3, 10 Pensacola Tce, Clarkson, WA, 6030
p 0438 843 467 e info@pzp.com.au i www.pzp.com.au

PI reader special
$50 Dyno Power-Runs

Nissan import specialists, parts supply & workshop facilities:
Engine Building Custom Fabrication Dyno Tuning
Engine Conversions Turbo Upgrades Performance Parts
Service & Maintenance Drift/Track Tuning

IN TERMS OF VOLUME, AUSTRALIA IS A SMALL PLAYER



Imprimatur

Words: Kristian Appelt

RAW Meet

I recently had the pleasure of travelling to Canberra to attend the national conference for the RAWS Association. RAWS is the acronym for the registered workshops that make sure our cars comply with Australian Design Rules before they hit the road.

The association that represents their interests has an annual conference, attended by representatives from the Vehicle Safety Standards branch of the new Department of Infrastructure and Transport (formerly DoTaRS). So, what was a scrubber like me doing in such esteemed company, you ask?

I was invited by the RAWS Association as a guest speaker for the conference, the first import broker to do so. Although I try to get around to all the workshops in other states at least once a year, opportunities to meet everyone in the one spot don't come around very often, so this was a fantastic chance to catch up with everyone in the one spot and put some faces to names.

With the heavy hitters of the import industry hanging off my every word (for the first 30 seconds at least...), I shared with them what I considered were the challenges facing RAWS at the moment.

The first was the issue of some workshops doing dodgy compliance jobs just so they can undercut their competitors on price. When the amount a workshop is charging for compliance costs LESS than the trade price of the parts needed to do the job properly, it's fairly obvious that corners are being cut.

While we (the customers) all love a bargain, it's the workshops who comply their cars correctly that are getting forced out of the market. If the good workshops close their doors, and the bad workshops get busted and shut down by DIT inspectors, then we could end up with no one left to comply anything in a few years' time. Cue the furrowed brows and nodding from everyone in the room.

The second challenge was that many workshops aren't doing enough to 'future-proof' their businesses. I never cease to be amazed by RAWs who call me looking for more compliance work, only for me to find that they only comply cars that every other workshop in Australia can do.

If I import an R33 Skyline to Australia, I have a choice of no less than 68 workshops that can do the compliance work. If I import a Y34 Cedric to Australia, there is only one RAW in Melbourne who can do the work. I should point out that this one RAW has been very good to me on Y34 compliance prices, but in reality he could charge whatever he wanted because he doesn't have any competition.

Workshops that ring me and ask which models are selling well are the ones that will probably not last long in the game, because chances are everyone else will be asking the same question.

If Evo VIIIs suddenly start becoming popular, for example, workshops will work feverishly on being able to comply them, but in six months' time, when they finally get Evo VIIIs listed on their schedule, the Evo VIII fad may have passed and another 20 workshops who had the same idea will be fighting with everyone else for the smaller number of cars still coming in.

Having listed both the JZS171 Toyota Crown and the C35 Laurel on the SEVS eligibility list recently, it has been disheartening to hear many RAWs putting them in the 'too-hard basket' rather than being brave enough to be the trail blazers with new models.

I cited one recent example where one workshop, despite massive headaches throughout the testing process, has managed to get an all-new model on their schedule and is now making twice the profit on their compliance as they do with their other models. The best way to thrive is to stay ahead of the game and take calculated risks; try and lead the market in new directions rather than simply following everyone else.

This led rather nicely into SEVS eligibility and how it impacts on RAWs. Anyone (and this includes you lot) who thinks that Japan has a never-ending supply of cars is in for a rude shock. Want an R34 GT-R V-Spec II? You'll be lucky to see three decent ones a week at auction. How about an S15 Autech? Try one every two or three weeks. My personal favourite is the manual Legnum with leather and/or sunroof, which appear around once every six months.

The drought has been caused by a few things. The most important one is that the number of countries importing used Japanese cars has skyrocketed in the last couple of years. In terms of volume, Australia is a small player.

I put a really strong bid on an Evo 6.5 a couple of weeks ago and was blown out of the water by a buyer from Sweden whose budget was 300,000 yen higher than mine!

With collectible cars leaving the country at a rapid rate, many in Japan are actually starting to store models such as R34 GT-Rs before they disappear all together. So, effectively, there are more buyers fighting over fewer cars, which means sale prices on the cars we're chasing will always stay high. The only way to keep moving forward is to add to the SEVS list cars that are available in greater numbers overseas and will still hold appeal to buyers in Australia.

Given that high-powered RWD sports cars have been fairly thin on the ground in Japan in recent years, the next big trend may well be European cars such as the VW Scirocco, which isn't far from being ready for compliance and import in Australia.

This topic generated some fairly interesting discussion around the room, and as with any chatter about SEVS eligibility, the topic of legislation and how it can be revised to better suit the needs of importers was never far from people's lips. I'll save that one for next month, as well as how I came to end up fighting over the mints in a lolly bowl with the head of the Vehicle Safety Standards branch! «

Impugnation

LETTER OF THE MONTH
WINNERS RECEIVE PRIZES
COURTESY OF EAGLE ONE

Don't know billet from ballet, STi from STD? Does your mate's mate's brother own the world's fastest car? Stumped how you stretch a 235 onto an 11? Ask us at jason@hpi.com.au

Dear PI,

I have been doing some research of late at cutting-edge turbo systems and noticed that in the US there are some companies using a compound turbo system to push more boost into the engine. Have you ever heard of this 'compound turbocharging' thing? What are its benefits and drawbacks?

Brendan – Hobart, TAS

Hey, Brendan. Compound turbocharging generally refers to one turbo blowing into the intake of another turbo. You're essentially further compressing compressed air. This helps develop big low-end torque, also meaning large boost without high turbo speeds. It's much more popular in the diesel world, especially in the tractor-pulling scene, and we believe it was also used on some Paris-Dakar trucks.

Put very short, the advantages are reduced lag and significantly increased power, but this comes at the cost of very high boost and usually fairly complex plumbing. As for being used with imports, there has been some compound-turbo development with Supras, both here and in US, and we noticed a large US Evo tuner has also jumped on board recently by compound-turbocharging some of their 4G63s.

It must be kept in mind, though, whether it's really necessary. After all, there's only so much bottom-end torque you can have before traction starts to become a major issue. If you're interested, give it a Google-bang. It's interesting stuff.

Dear PI,

You might remember me. I wrote to you a while ago talking about my Evo VII that I'd just finished building for the track. Since then I've had it out to QR [Queensland Raceway], and it's been great fun. You'd need a f*cking huge eraser to wipe the smile off my face!

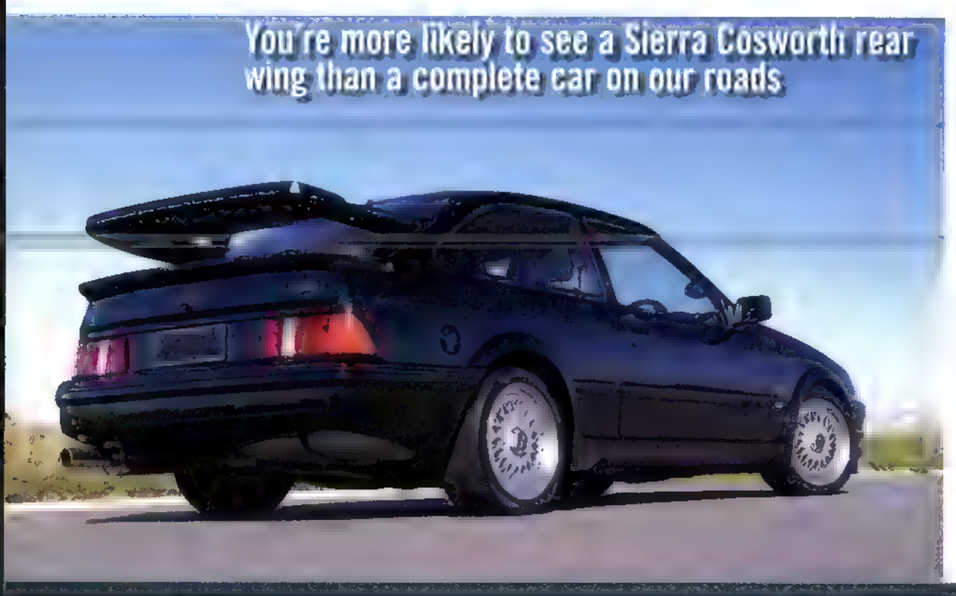
I have been having one issue. I have an aftermarket brake kit with six-piston calipers and large rotors, which work no problem, but on the street they squeal like crazy, every time I hit the brakes. It's almost too much to even take it out. Help?

George – via email

It is probably not your brakes but your pads that are causing you issues. You can easily build up some glazing on pads after hard track use. This requires the pads to be removed and 'faced' by a braking specialist to remove the glazed build-up. The rotors will usually have to be ground as well.

There are other factors that come into play, including your driving habits, ie. how you apply brakes on the street, that can affect this issue, so our recommendation is to hit up a braking expert if it continues.

Also consider swapping out to a more street-friendly pad for the street. Often 'heavy duty' or 'metal' branded pads meant for 4WDs or towing work extremely well as a street pad, and they're significantly cheaper.



FORMULA ONE AND RACE CARS AS A RULE STAYED AWAY FROM THE FLEDGLING BALL-BEARING TURBOCHARGER TECHNOLOGY

Dear PI,

I'm hoping you can clear up an argument me and my mate were having around ball-bearing turbochargers. Without saying who believes what, were ball-bearing turbos born from Formula 1?

Dom – via email

No. Martin addressed this some time ago in another title, stating the following: "Nissan was the technology partner with Garrett that invested heavily in ball-bearing turbochargers for its range of road cars in the late 1980s. Some of the first examples were found on engines like the RB20DET in the R32 Skyline GTS.

"Formula One and race cars as a rule stayed away from the fledgling ball-bearing turbocharger technology, as its reliability was far from proven in terms of long-term durability."

Dear PI,

As someone about to move interstate (again) for the third time in two years, it's frustrating me that it's so hard to get a clear answer as to what modifications are legal in which state and which set of rules to go by. What exactly is the policy between states? Is there any kind of fluid movement between any of it? Or should we simply give in and strangle this government lifeless?

Ryan – via email

It's in an incredibly vague and grey area. Here are the facts...

There is a National Code of Practice for Light Vehicle Construction and Modification (NCOP). However, although it's a national code (all states and territories contributed to its creation), it's up to each state as to whether or not they partly or fully adopt it to any degree. 'Adoption of the code' is a fancy way of saying 'interpretation' of the code, ie. lots of things are left to 'interpretation'.

Most states and territories have 'adopted' the code in full. These states are Queensland, the Northern Territory, Western Australia, South Australia, ACT and Tasmania. Victoria and NSW do their own thing.

There are also the Vehicle Standards Bulletins (VSB). The one we're most interested in is VSB14. Basically, VSB14 provides info on the design, manufacture, sale, modification, import and repair of road vehicles. In short, what NCOP and VSB state are standards required for vehicles and vehicles' mods to pass ADR. These documents are 'live' and are always changing/updating. Once ADR is passed and certified, a car is a-okay.

One very common phrase you may see throughout the NCOP and VSB14 is the term "built to a good standard", which seems to us an extremely loose statement. At the end of the day, an engineer can tell you what's legal or what's not, as they know the zillions of ADR laws. That's why it comes down to them to certify your car.

Dear PI,

High (stet) guys, great mag! As a long-time reader and watcher of all things HPI, and mo' recently PI, I think a magazine like yours is quintessential to motoring enthusiasts, as not enough printed material is on hand to access, and the internet is a bit too 'here say'.

It's nice to see info with its feet firmly planted in the soil, so to speak, roots extending all the way back to Japan. Though they aren't the only PIs out there. How about a Cosworth Sierra 500 or alike? Oh, and keep up the 'JZ lovin'. As an Aristo owner, I can tell you they rock. Peace out.

Stephen C – via email

Thanks for the kind words, Stephen. We do feature 'imports' from all over the globe, but we'd love to feature more European cars, provided they're modified correctly to suit our readership. The Sierra Cosworth is an extremely potent model, though most examples wind up in our sister titles Street Fords and Extreme Fords. If, however, the right car came along, sure, we'd feature it. And yes, plenty more 'JZ action on the way.

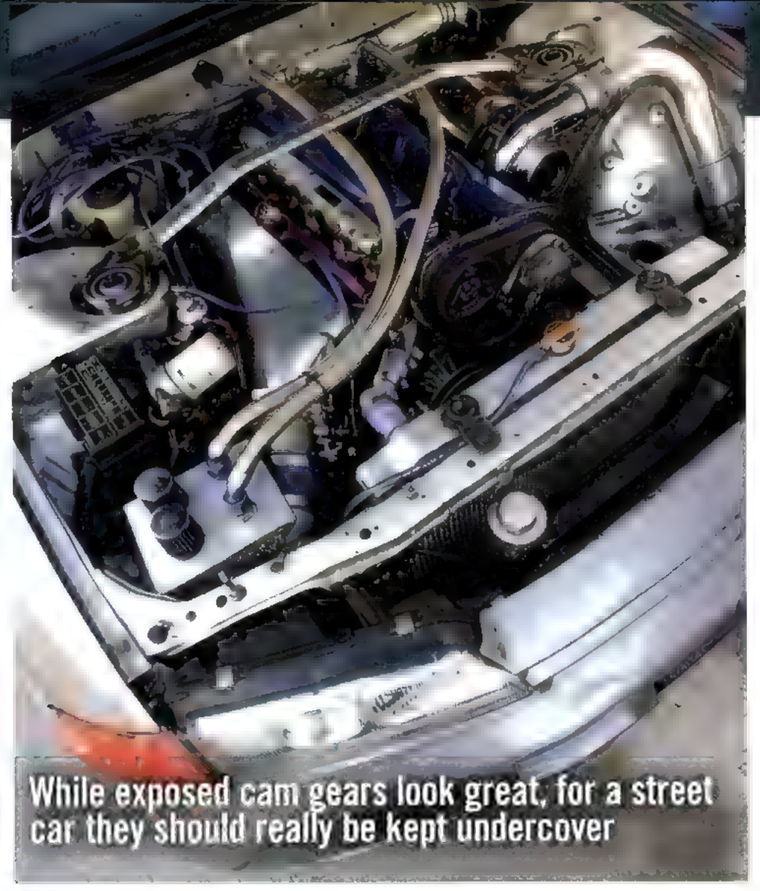
Dear PI,

Do S13 suspension and brake components fit into a Corolla KE70? I'm looking at building a budget drifter and would like you're advice if you can give it. What kind of prices would this stuff be?

Matthew – via email

Yes, they do. Things like S13 lower control arms, cross-member, coil-over struts and brakes are bolt-up with hardly any work. You've also got to consider the aftermarket options this opens up as well. It's one of the reasons why KE70s have become so popular of late, so much so they're almost the next Sprinters of the used-car market.

As for pricing, used you can expect to pay around $75–$300 for most suspension arms depending on make and model. Struts range from about $500 to $800 for a set, with aftermarket struts generally more expensive again.



While exposed cam gears look great, for a street car they should really be kept undercover

Dear PI,

Thanks for putting together such an awesome mag. Because you are the guru, I thought I'd ask you about my 180. If you can get back to me ASAP, that would be appreciated.

The car's an S13 with a pretty stock engine; just a cannon, exhaust, air filter and aftermarket blow-off valve. It has not been tuned, but runs fine. Anyhow, I installed a cheapo front-mount intercooler kit the other night. It went on fine, I super-carefully checked all the clamps were tight and the piping correct, connected everything back up and, bang, Johnny Drama.

The car had major trouble idling, shook about and then just died. It's now in limp mode, puffing out black smoke, and I have no idea why. There's quite a lot of smoke, so maybe it's something else related?

Greg P – via email

Let's start with the simple stuff first. Did you leave anything in the piping accidentally – rags, tools, etc? Did you perhaps drop something into the piping? Did you reconnect your airflow meter, and is it the right way around? That's a pretty common one.

The smoke, however, points to a leak being more likely. Triple-check all your lines, fittings and connectors. Have any come loose, or off? Are there any splits in anything? If in doubt, do the old soapy water spray trick to see if there are any bubbles cropping up. A smoke test can also be performed by someone qualified if you want to be 100 percent.

Dear PI,

I'm halfway through the build of my third GT-R, this time an R33, and think you might be able to lend me your assistance. Do you think I should get adjustable cam pullies? Would they be worth it? Which ones are best? Why?

Dean – via email

Dean, there are a number of quality manufacturers that produce cam gears for the RB26DETT that will work fine. If we had to pick one, though, we'd go with Tomei.

We think cam gears can be extremely beneficial when set up correctly on an RB26. The important point to consider with the Tomei adjustable cam pullies is that they are machined from Duraluminum, essentially a high-grade aluminium, which means they won't slip and will be durable. They are a little bright, so we'd suggest keeping them under the pulley cover if possible.

Dear PI,

I want to thank you guys for featuring more Supras lately. I was getting a bit of sick of all the Skylines there for a while. My motto has always been 'why buy a GT-R when you can build an 800hp Supra for half the cost?'.

I want to know where I can get OEM side skirts for my MkIV. I tried going through the Toyota database at my local dealer (thanks Tim), but nothing came up no matter what combination I tried. Any other ideas?

Jazza – via email

Jaz, you're unlikely to have much luck at your local Toyota dealer. The best place for digging this stuff up is actually local Supra forums. They tend to pop up quite a bit from what we've seen.

The other option is have a hunt through local Toyota wreckers, or use a broker to import some in from Japan or the States. Have a flick through advertisers in the mag, who'll be more than happy to help you out. Good luck.

Dear PI,

I know everyone's an RB20 hater, but I don't think they're that bad. They are never going to be a killer low-end engine, but I think they do have strong points. Before I get modifying, I want to ask what the stage of everything should be; like what should I do first and then on from there.

I am wanting decent power, but not at the cost of a blown engine.

Owen A – via email

You're right. RB20s are not as bad as everyone makes out, but the usual modification procedure remains essentially the same as other RB engines. Let's have a look.

You want to start by raising the boost pressure. You can effectively tag on another 7psi to the factory 7psi for 15psi in total before you start having 'ceramic' issues. If you want more boost or have more mods in mind, we'd suggest moving up to an RB25DET ball-bearing turbo, which will make significantly more power at the same boost level. They install quite easily, with only the compressor outlet pipe needing to be modified to suit the three-bolt flange and the oil lines slightly drilled to accept the bigger banjo bolts.

A decent front-mount intercooler would be the next step, as the standard items are quite small and restrictive. Any common-sized front-mount will do, but the GT-R and Supra 7M-GTE factory intercoolers also do a good job and fit nicely.

Next is a quality, free-flowing exhaust system. At a minimum, you want a 2.5in system with a straight-through design and one that's mandrel, not press, bent. You can expect to see gains of almost 15 percent from this single mod alone.

The intake can also benefit with some work. The best option is build a cold-air box with a less restricted intake path over the factory box.

Note that pinging can become an issue with boost levels beyond 12psi for an RB20. As such, aftermarket management may be required that will remove some of the ignition timing 'on boost'. There are plenty of options out there now, but do make sure you choose the right tuner. From here on it's internals and the big-money items, most of which do make something like an RB25 a better proposition.

Dear PI,

I've been looking at some possible import choices thanks to a recently expanded family. The Toyota Caldina's looking pretty good. Do you think this is a good choice?

It does need to be a wagon, if possible, and I'd also like the ability to do some work on it myself if I can work that. I'm coming from a long line of Commodores (sorry), so I also need something with torque to hail around my better halves. What do you guys suggest, maybe even something left-field?

Daniel – via email

Hi, Dan. The Caldina is a good choice, especially the latter models, which were well-specified. Contrary to what people may say, you can get excellent fuel economy from them, as any turbocharged import, provided you drive them right. The fact the Caldina is a four-cylinder also helps over the following recommendations below, plus it also has a strong mid-range 'kick' that can be quite amusing.

Also on the cards should be the Nissan Stagea. There are quite a few models to choose from, including more recent offerings with the VQ25DET. If ultimate power is your aim, and money no object, the RB26-powered Autech 260RS is the pick. In terms of future modification, a Stagea might be your best bet, as parts for the Caldina are somewhat limited.

We are also going to throw the Legnum into this decision as well, as it offers similar power levels with lots of low-end grunt thanks to small twins.

The Toy Shop
AUTO IMPORTS

EVO V now available from $19,999

PARTS AND CAR SALES

40 HALF CUTS IN STOCK (WITH WARRANTY)
DISMANTLING ALL POPULAR SEVS VEHICLES
1000s of used aftermarket parts
Freight arranged anywhere in the world
Finance for parts and half cuts available T.A.P.
38A Enterprise Drive Beresfield 2322
(1.5 hours up the F3 North of Sydney)
Ph 02 4966 2233 Fax 02 4966 2200
Email sales@japimports.com.au
www.japimports.com.au
Licensed motor dealer 17633

HP1120_08

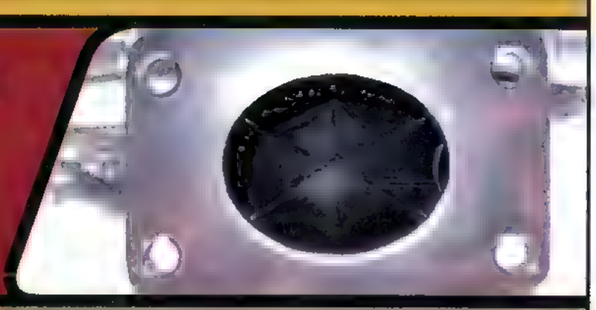
Ph: 0410 730 598 Email: info@6boost.com

6boost.com
TURBO MANIFOLDS

- 6Boost turbo manifolds are designed around our unique "merge" collector, based on the same technology used in high-end motorsport for many years. The design helps "Scavenge" the cylinders with horsepower gains in the region of 7-15% and spool increases of 200-400rpm not uncommon.

ALL MANIFOLDS MADE TO ORDER / CUSTOM DESIGN / **NO EXTRA COST**
// TRADE ENQUIRIES WELCOME //

SICK OF REPAIRING CHEAP IMPORTED AND INFERIOR MANIFOLDS?
TRY THE 6BOOST LIFETIME WARRANTY



MANIFOLDS AVAILABLE FOR:

Ford // EA-AU Falcon, BA Falcon & 250 Crossflow, Falcon & Cortina **Mitsubishi //** 4G63 Lancer, Evo 1-3, Evo 4-9
Toyota // 1JZ-GTE, 2JZ-GTE, 1GGTE, 3RZ, 4AGZE RWD **Holden //** Gen3 Twin & Single Turbo, High & Low Mount
Nissan // RB20/25/26/30, SR20, CA18, FJ20 (most manifolds available in high and low mount applications)
FLANGE PATTERNS AVAILABLE FROM T25 - T51 AND MITSU/HKS TURBOS

ZM146_06

JAPLINK motors

Compliance

Buy your car direct and save.

We will comply your car and do everything you need to get in and drive away.
If you need help to find a car we not only have real people on the ground in Japan, our people are family who also buy our own cars. Our family have over 30 years in the automotive industry in Japan and can source some very limited edition models.
We will provide you with sound advise not sales jargon.
If needed we can organize everything for you once you've purchased your car.

MENTION THIS AD AND WE WILL THROW IN A FREE ENGINE OIL CHANGE

Clutches

- Evo 4,5 & 6 - **$1349** fitted
- Evo 7, 8 & 9 - **$1499** fitted
- VR4 / Legnum - **$1499** fitted
- S15 Silvia – Clutch & Flywheel kit - **$1499**
- S13 / S14 - **$1099** fitted
- GTR – R32 – **$1199** Push type (89-92)
- GTR – R32 - **$1299** Pull type (93-94)
- GTR – R33 – **$1349** fitted
- GTR – R34 – **$1349** fitted
- Supra Turbo– JZA80 – **$1499** fitted (button type)
- RX7 ser 6 -8 - **$ 1349** fitted

All prices include fitting and GST

175 Parramatta Road, Haberfield NSW 2045 | P: 02 9716 0857 | E: sales@japlinkmotors.com.au

www.japlinkmotors.com.au

RACING IS WHAT WE DO

DRIFT | DRAG | STREET

We specialise in all:

- Performance tuning & upgrades
- Modifications and conversions
- Custom fabrication
- Race and street set ups
- Servicing & repairs

IF YOU WANT YOUR CAR TO GO, STOP AND HANDLE THEN SEE THE TEAM AT...

JC Racing

23 LULAND ST BOTANY

(P) 02 9316 9890 | (F) 02 9316 8786

(E) john@jcracing.com.au

www.jcracing.com.au

Classic Performance Dyno Centre

PROFESSIONALLY TUNED AND SERVICED AT SOUTH AUSTRALIA

EFI CARBURETTOR LPG

RWD FWD AWD

Performance Upgrades

Street and Race Car

Dyno Tuning

Power Runs

Club Days

Factory ECU Remapping

Aftermarket ECU Mapping

33 Chapman Rd

Hackham SA 5163

Ph: (08) 8384 2899

www.classicperformance.com.au

email: ashley@classicperformance.com.au

STCOM179_08

SKR

Steve Knight Racetech

Specialising in:

- Mitsubishi Evolutions
- Performance Car enhancements
- Dyno tuning
- Engine management
- Race/track set-up and suspension
- Mechanical repairs and more!

Steve Knight

8 Walla St, Lonsdale SA

(08) 8384 2052

ZM149_12

VIS Rotary

Sydneys latest rotary workshop

SPECIALIZING IN ALL AREAS FROM SERVICING, TUNING THROUGH TO RACE CAR PREPARATION

- RX8 LOG BOOK SERVICING

Over 10yrs Rotary Experience

10/19 Graham Hill Road NARELLAN NSW 2587

PH: 02 4647 8763

www.visrotary.com

SYDNEY AUTO DISMANTLERS

HIGH PERFORMANCE IMPORT ENGINES

SPECIALISING IN JAPANESE & LOCAL USED CAR PARTS

FREE Delivery

FRONT CUTS

- TOYOTA
- HONDA
- NISSAN
- MAZDA
- SUZUKI
- SUBARU
- DAIHATSU
- MITSUBISHI

We Buy Damaged Cars

46-48 Claremont Ave, Greenacre NSW 2190

Ph: (02) 9709 2800

Fax: (02) 9709 2804 | Email: sydneyauto@hotmail.com

www.sydneyautodismantlers.com.au

WHEELS/TYRES TOO BIG? • TYRES SCRUBBING? WE CAN SOLVE YOUR PROBLEM
GUARD LIPPING/FLARING • MOBILE SERVICE
PH: 0432 109 331
Sydney GUARD ROLLING
0432109331
www.sydneyguardrolling.com.au

AUTOBASE
ENTERPRISE
Direct importer of used Japanese high performance engines, half cuts & body parts
WE STOCK
COMPETITIVE PRICES
33 Fitzpatrick Street, Revesby, NSW 2212
Tel: (02) 9771 9263
Fax: (02) 9771 9264
Email: autobase@bigpond.com
www.autobaseenterprises.com.au

Hyperdrive
MOTORSPORT
PRODUCTS AND SERVICES:
Nissan import specialists
Nistune rom tuning
All modifications inc fabrication
Race car prep
Maintenance and tuning
Authorised Greddy dealer
Unit 3/15 Vale Street Malaga, WA 6090
e. info@hyperdrivems.com.au p. 08 9209 3100 f. 08 9209 3102
www.hyperdrivems.com.au

ema australia
www.enginemaster.com.au
Engine Master Australia
Telephone:
02 60255666
Fax:

TROJAN
Motorsport
(02) 62426277
We deal with Trust, Nismo, Xtreme, Turbosmart, Sunoco Fuels, Federal Tyres, Aeromotive JR Filters, to mention a few. We are also HKS Pro Dealer & can source a large range of hard to find new and used parts. Our website has a good indication at.
WWW.TROJANMOTORSPORT.COM.AU
Unit 2/45 Heffernan Street, Mitchell ACT 2911
Phone: 02 6242 6277 | Fax: 02 6242 6233
Email: sales@trojanmotorsport.com.au
HPI 04 11

ULTRA RACING AUSTRALIA
IMPROVE YOUR CARS HANDLING & RIGIDITY
WE CATER FOR MOST POPULAR CAR MAKES & MODELS
3 YEARS MANUFACTURERS WARRANTY
(conditions apply)
DEALER ENQUIRIES WELCOME
Email: Ultra.Racing.Australia@hotmail.com
WWW.ULTRARACINGAUSTRALIA.COM

SMB
EXHAUST
for when you're serious about performance!
P 02 9829 1887
P 02 8006 4838
F 02 9829 1662
sales@smb.net.au
info@smb.net.au
www.smb.net.au
www.smb.net.au
11 Aero Rd, Ingleburn N.S.W AUSTRALIA 2565

Graham's SWT
Ph: 3208 5208
CONTACT
Phone: 07 3208 5208
Fax: 07 3208 5747
15 Moss Street Slacks Creek QLD 4127
Email: kingaroy@mac.com
www.streetwheelsandtyres.com.au
WHEEL REPAIR • WHEEL REPAIR • WHEEL REPAIR
NOW AVAILABLE
• SUSPENSION MODIFICATIONS
• GUARD ROLLING
STREETWHEELS & TYRES

IMPORT FACTORY .COM.AU

21 Walkers Rd, Nunawading 3131
Showroom: (03) 9878 0918
Workshop: (03) 9894 7844
info@importfactory.com.au

WE SPECIALISE IN:

- VEHICLE SALES
- BROKERAGE • SERVICE
- PARTS • COMPLIANCE

For current stock & information please visit
www.importfactory.com.au

HPI129 01 JR

LOCAL IMPORT NISSAN & DATSUN
SPECIALISING IN:
NISSAN HALFCUTS
PARTS AND PANELS
ENGINE CONVERSIONS
TRANSMISSION CONVERSIONS
PERFORMANCE MODIFICATIONS

NIZZ Performance

UNIT 2 14 GREENGLEN RD ASHMORE
QUEENSLAND
1300 NIZZPRO

WWW.NIZZPROPERFORMANCE.COM.AU

street drag Challenge

PERFORMANCE imports

www.hpi.com.au

Send all updates and new entries to jason@hpi.com.au. Please include ALL details.

4WD OVER 2400CC

Car	Engine	Capacity	Compressor	Nitrous	Tyres	ET	60ft	MPH	Track	Driver	Workshop	Pos.
R32 Skyline GT-R	RB26DETT	2568cc	Garrett GT47	No	M/T 255/60R16	8.7	1.27	158	Wilbnk	Mark Jacobsen	Godzilla Motorsport	1
R32 Skyline GT-R	RB26DETT	2568cc	Garrett	No	M/T 255/55R16	8.746	1.4	158	Wilbnk	Theo Woollett	Theo Woollett Racing	2
R32 Skyline GT-R	OS RB30	2996cc	T67-25G x2	No	M/T 275/40R17	8.899	1.467	160.89	AIR	Kier Wilson	Willall Racing	3
R33 Skyline GT-R	OS RB30	2996cc	GT2835R x2	No	Nitto 275/40R17	9.45	1.48	151.25	AIR	John Munro	Tilbrook	4
R32 Skyline GT-R	RB26DETT	2568cc	HKS T51R SPL	No	M/T 255/50R16	9.457	1.36	142.70	Wilbnk	Paul Diemar	Godzilla Motorsport	5
R32 Skyline GT-R	OS RB30	2996cc	TD06-20G x2	No	M/T 275/40R17	9.69		149.8	Hthcte	Kurt Wilson	Willall Racing	6
R32 Skyline GT-R	RB26DETT	2568cc	GCG x 2	No	Yoko A048R	9.78	1.54	143	Wlbnk	Mark Berry	Hi-Octane/CnJ	7
R32 Skyline GT-R	RB26DETT	2568cc	TD06-20Gx2	No	M/T 255/50R16	9.81	1.485	144.09	Wlbnk	Roger Garcia	Coastal Dyno & Perf.	8
R32 Skyline GT-R	RB30/26	2996cc	GT3037S x2	Yes	M/T 255/50R16	9.95	1.676	147.3	WSID	Paul Mouhayet	Self/C&V Performance	9
1996 Subaru WRX	EJ20	2457cc	Garrett	No	BFG 225/45R17	9.963	1.724	149.02	Wlbnk	Errol Brittain	Flat 4 Performance	10

4WD UNDER 2400CC

Car	Engine	Capacity	Compressor	Nitrous	Tyres	ET	60ft	MPH	Track	Driver	Workshop	Pos.
Lancer Evo II	4G63	1997cc	GT35R	Yes	BFG Drag 235/60R15	9.67	1.48	147.3	Wlbnk	Rob Barac	APC	1
CC Lancer GSR	4G63	1997cc	GT3540	No	BFG Drag 215/45R17	9.81	1.51	143	AIR	Simon Podlewski	Morpowa	2
Proton Satria	4G63	1997cc	GT35R	Yes	M/T 235/60R15	10.08	1.6	140	WSID	Joseph Maiorana	Self	3
1998 Lancer GLXi	4G63	2158cc	GT3540	No	Toyo RA-1 225/45R17	10.195	1.739	138.24	Kwinana	Silvio Commisso	Speedworks	4
1992 Subaru Brumby	EJ20	2136cc	T61	Yes	Azenis 215/45R17	10.41		138	Hthcte	David Khoury	Tony Rigoli	5
1999 Subaru WRX	EJ20ET	2197cc	T62	Yes	Falken 225/45R17	10.48	1.975	141	Wlbnk	J. Montesalvo	Tony Rigoli	6
Subaru WRX	EJ20	1994	APS SR50	Yes	Falken ST115 215/40R17	10.762	1.64	127.03	WSID	Fardie Nahas	Croydon Racing	7
Subaru WRX	EJ20	1994cc	GT35	No	Falken 225/40R17	10.81		135	EstnCk	Bakker Arja	V&E Rigoli	8
1997 Subaru WRX	EJ20	2356cc	T66	No	Azenis 225/40R17	10.892	1.876	141	EstnCk	Brian ElHassan	Tony Rigoli	9
CC Lancer GSR	4G63	1997cc	GT30	No	Falken 225/40R17	10.95	1.82	128	EstnCk	John Tripodi	V&E Rigoli	10

RWD OVER 2400CC

Car	Engine	Capacity	Compressor	Nitrous	Tyres	ET	60ft	MPH	Track	Driver	Workshop	Pos.
1974 KE20 Corolla	2JZ-GTE	2997cc	Pro 88-GT	No	M/T 275/50/15	8.57	1.34	164.5	Wlbnk	Scott Hoffman	Cleveland Exhaust	1
1991 Cressida	1.5 JZ-GTE	2997cc	GT42	Yes	M/T 255/50R16	9.36	1.501	157	Wllbnk	Shane Crichton	Blacktrack Performance	2
Mazda MX5	13B	2616cc	GT51R	Yes	M/T 235/60R15	9.88	1.432	134	WSID	Lee Docherty	NFSRacing/Rocco's	3
JZA80 Supra	2JZ-GTE	2997cc	T88H-38GK	No	BFG 295/50R15	10.04	2.23	150.3	Wllbnk	Carlos Novais	Millennium Motorsport	4
R33 Skyline GTS25t	RB25DET	2498cc	ATP600	No	M/T 255/50R16	10.12	1.64	136.6	Calder	Ryan Quinn	ATP/Bresciani	5
JZA80 Supra	2JZ-GTE	2997cc	GT42R	No	M/T 275/50/15	10.24	1.66	135.22	Hthcte	Joel Goodall	Self	6
Nissan S15	RB25DET	2498cc	GT35	No	M/T 255/50/16	10.33	1.52	133	WSID	Peter Vozzo	Don't Spin Racing	7
JZA80 Supra	2JZ-GTE	2997cc	T88-34D	No	M/T 255/50R16	10.419	1.683	138.08	Wllbnk	Matthew Le Grand	GT Auto Garage	8
R32 Skyline GTS25t	RB30/25	2998cc	GT4049	No	M/T 255/50R16	10.449	1.71	135.41	Wllbnk	Ryan Acworth	Mercury Motorsport	9
JZA80 Supra	2JZGTE	2997cc	T88-34D	Yes	BFG Comp TA 275/75R15	10.46	1.66	131.3	WSID	Nabil Morcos	C&V	10

RWD UNDER 2400CC

Car	Engine	Capacity	Compressor	Nitrous	Tyres	ET	60ft	MPH	Track	Driver	Workshop	Pos.
S13 Silvia	SR20DET	1998cc	Garrett T04Z	No	M/T 275/40/17	9.65	1.464	144.6	WSID	Paul Torony	Advance Motor Mechanics/JEM	1
1973 Datsun 1200	SR20DET	1998cc	GT3040	Yes	M/T 235/60R15	9.79	1.397	136.7	Wllbnk	Michael Silk	Self	2
1969 Datsun 1600	SR20DET	1998cc	GT30	No	M/T 235/60R15	9.89	1.459	131.23	Wilbnk	Mick McGregor	Competition Tuning	3
180SX	SR20DET	1998cc	Turbonetics	No	MT 255/50/16	9.924	1.47	141.7	Willowbank	Ryan Blank	Self	4
S14 Silvia	SR20DET	1998cc	T60	No	Hoosier 255/50R16	10.11	1.44	137	WSID	Ryan Blank	Self/CTP Motorsports	5
S15 Silvia	SR20DET	2100cc	T51R-KAI	Yes	Hoosier 275/50R15	10.121	1.416	121.91	AIR	Theo Spartalis	GT Autosound	6
S13 Silvia	SR20DET	1998cc	GT3582R	No	M/T 255/50R16	10.506	1.644	139.36	Willowbank	Trent Whyte	Mercury Motorsport	7
1974 KE20 Corolla	SR20DET	1998cc	GT35	No	M/T 235/60R15	10.539	1.590	131.23	Hthcte	Michael Kalaitzakis	Self/Race Fab	8
1988 MR2	4AGZE	1595cc	GT30	No	BFG Drag 225/60R15	10.66	1.69	131	WSID	Ben Sindjelic	Groove Ryder Fabrications	9
Datsun 120Y	RB20DET	1998cc	GT35R	No	M/T 205/50R15	11.08	1.54	118	Willowbank	Steve Roscarel	Self/Kev Rowley	10

FWD

Car	Engine	Capacity	Compressor	Nitrous	Tyres	ET	60ft	MPH	Track	Driver	Workshop	Pos.
Swift GTi	G13B	1370cc	GCG	Yes	Toyo R888	11.247	1.987	135.00	WSID	Dave Homer	DMW Motorsport	1
97 Civic VTiR	B16A	1595cc	Hypertune	No	BFG 225/50R15	11.418	1.962	134.04	WSID	Ben Creswick	Hypertune	2
Pulsar SSS	SR20DET	1998cc	GCG	No	M/T 225/50/15	11.43	2.082	130.32	Wilbnk	Rowan Armstrong	Godzilla Motorsport	3
Starlet GT	5E-FTE	1331cc	VF22	No	M/T 205/50R15	11.599	1.847	121.51	Wilbnk	Trent Gillespie	Blacktrack Performance	4
1985 Civic	K20A	1998cc	None	No	BFG 215/60R14	11.676	1.732	116.55	Wllbnk	Glenn Alcorn	GRP Automotive	5
1995 Civic	B18A	1796cc	GT3040	No	M/T 235/60R15	11.758	2.035	124.00	Wllbnk	Luke Ryall	Hi Tech Modifications.	6
1996 Civic	B16A	1595cc	GCG	No	BFG 225/50R15	12.016	2.117	128.41	WSID	Ben Creswick	Hypertune	7
1991 Civic	B18CR	1796cc	HKS GT35R	No	Toyo T1r 205/55/15	12.113	2.03	123.97	Wilbnk	Jimmy Luu	TeamPov	8
1992 Starlet GT	5E-FTE	1500cc	GT28	No	Azenis 205/45R17	12.120	1.987	119.44	WSID	Nick Vassiliades	Tony Rigoli	9
1991 Lancer GSR	4G63	1997cc	TD06-20G	No	BFG drag 225/50R15	12.120	1.984	115.02	WSID	Robert Anderson	Millennium Motorsports	10

The records below are for Japanese cars in Australia running treaded radial tyres. Note that times recorded with methanol or nitro-based fuels are not included. Updated times have been highlighted.

DON'T MISS NEXT MONTH'S **ACTION-PACKED ISSUE!**

NEXT MONTH IN PERFORMANCE imports

ON THE RUN KILLER EVO

TOP 10 IMPORTS WE DIDN'T GET

+ PIT ROAD KEI RACER • JAMBO ACTION • WRECKER BARGAINS
PHOENIX'S POWER R32 • OZ'S BEST 300ZX?

IF YOU BUY ONLY ONE PI THIS YEAR, MAKE SURE IT'S ISSUE 132.

ON SALE 11/03

ROLIN AUTOMOTIVE IMPORTS

www.JapParts.com.au

AUSTRALIA WIDE DELIVERY

31 Central Drive, Burleigh Heads, Gold Coast, QLD 4220 | Ph: (07) 55 938 533 | Fax: (07) 55 936 938

- HALF-CUTS
- PANELS
- GEARBOXES
- INTERCOOLERS
- PERFORMANCE
- ENGINES
- DRIFTBITZ

DAIHATSU
HD-E Detamossa Charade Man 1/2 Cut
NISSAN
CA18DET FWD+RWD Manual 1/2 Cut
RB20DET 1/2 Cut Auto/Manual
RB25DET R33 Manual Package
SR20DET 1/2 Cut S13+S14 + GTIR
SR20DE Neo VVL Auto Tip Tronic
VG30DETT 1/2 Cut Manual
HONDA
Prelude H22A Manual ½ cut
MAZDA
BP Turbo 1/2 Cut Manual
13B Turbo 1/2 Manual
13B Twin Turbo Series 6 Manual 1/2 Cut
MITSUBISHI
4G63T VR4+EVO Manual 1/2 Cut
6A12 Mivec FTO
4G93T Lancer Manual 1/2 Cut
6A12-13TT Galant Manual 1/2 Cut

TOYOTA
3SGE Beams ½ cut
3SGTE 1/2 Cut Celica GT4/MR2
4AGE 20 Valve 1/2 Cut Silver/Black
4AGZE 1/2 Cut Supercharged Manual
4E Starlet Turbo 1/2 Cut Manual
1GGTE/ZE Twin Turbo/SChgd 1/2 Cut
1JZGTE Supra JZA70 & Soarer
2JZGTTE Aristo Auto 1/2 Cut
7MGTE Manual 1/2 Cut
1UZFE V8 Auto 1/2 Cut
SUBARU
EG33 6Cyl SVX Auto 1/2 Cut
EJ20T Early Legacy 1/2 Cut
EJ20TT Early Legacy 1/2 Cut
EJ20T WRX Manual 1/2 Cut
Manual Gearboxes available for
CA18DET, SR20DET, RB20DET, RB25DET, 1GGTE, 1JZGTE, 4AGE, EJ20T, EJZ0TT

ENGINES
Nissan
CA18DET
SR20DET
RB20DET
RB25DET
VG30DETT
Toyota
1GG
1JZ
7MGTE
4AGE
4AGZE
2JZGTTE
Subaru
EJ20T
SUPERCHARGERS
4AGZE
1GGZE
INTERCOOLER KITS

WEBSITE SPECIALS ON NOW!!!

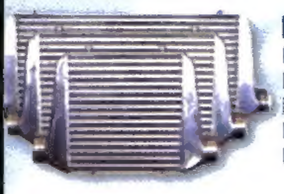
Prices are starting from and subject to change. Prices includes GST

DRIFTBITZ

AFTERMARKET PERFORMANCE PARTS, ENGINES, HALF CUTS + ACCESSORIES

TURBO MANIFOLDS

Prices subject to change. Prices includes GST



ROLIN INTERCOOLERS

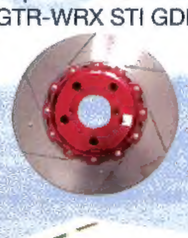
Rolin Mini	*280x300x76mm 2.5" + 3" outlets*	from $150
Rolin Super	*450x300x76mm 2.5" + 3" oulets*	from $175
Rolin Monster	*600x300x76mm 2.5" + 3" outlets*	from $185
Rolin Super Monster	*600x300x100mm 3" outlets*	from $275
Rolin GTR Skyline	*3" outlets*	from $375

From $440

DRIFTBITZ BUCKET SEATS
Many Styles / ADR approved!

Fixed back & recliner

2 Piece Disc Rotors
Supra JZA80-EVO8-R33
GTR-WRX STI GDB



BOOST CONTROLLER
TURBO TIMER

PERFORMANCE ALLOY RADIATORS
for CA18-SR20-RB20-RB25

CAM GEARS
3SGTE/4AGE/1JZ/2JZ
CA/SR/RB - EVO4-9
from $150 each

INTAKE PLENUM
RB20DET,RB25DET,
CA18DET, SR20DET 1JZGTTE,
2JZGTTE EJ20T WRX 01+
4AGE 20V Blk/Silver
4G63T EVO 1-9

CAMBER PLATE
Nissan S13
$330 pair

$350

UNIVERSAL 80mm, 90mm, 100mm

EXTERNAL WASTEGATES
From $220

CARBON FIBRE
RB25 Plug Cover

CARBON FIBRE
RB25 Cam Cover

4AGE Turbo Exhaust Manifold

UNIVERSAL
oil cooler and filter kit
$330

BLOW OFF VALVE TRUMPET & DUAL PORT & PLUMB BACK
From $99

N1 STYLE CARBON FIBRE HOOD

SILICON HOSES

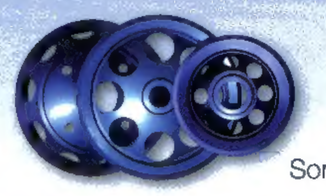
ALLOY PIPES

Nissan CA18DET *Low + High Mount*	From $299
Nissan SR20DET *Low + High Mount*	From $299
Nissan GTR RB26 *Single + Twin Turbo*	$330
Nissan GTR RB26 *Twin Dump Pipe*	$330
Divorced Dump Pipe *SR20DET*	$185
Nissan RB20DET *High Mount*	$395
Nissan RB25DET *High Mount*	$395
RB20+25DET *Dump pipe*	$220
Toyota 2JZGTTE *High Mount*	$330
Toyota 3SGTE MR2 *Standard Mount*	$440
Toyota 3SGTE MR2 *Dump pipe*	$275
Toyota 7MGTE *High mount*	$440
Subaru WRX 02-05 *Header*	$660
Toyota 1JZGTE *T3+T4 Single Turbo*	$550
Holden RB30 VL Single Turbo from	$550

INTERCOOLER KITS
Subaru WRX 96-05
Subaru WRX 01-05
Nissan Silvia, 180SX
Nissan Skyline HR32,33,34
Nissan 200SX S14+S15
Nissan 300ZX, Nissan GTIR
Nissan S13, CA18DET, SR20DET
Toyota Supra

From $400 inc GST

CA18DET/SR20DET PULLEY KIT



HICAS & SUSPENSION ARMS

Some pictures for illustration purposes.

NISSAN 350Z STAINLESS STEEL EXTRACTORS & EXHAUST NOW AVAILABLE
STAINLESS STEEL WRX 02-05 TURBO BACK 3" EXHAUST FROM $770

www.DriftBitz.com.au

AUSTRALIA'S LARGEST JAPANESE TUNING PARTS DEALER

save time, shop online!

BLITZ
nismo
APEXi
JJR
HPI HIGH POWER IMPROVEMENT
ATTKD
MOTUL
BC
TURBOSMART PERFORMANCE PRODUCTS
SplitFire
RAYS ENGINEERING
sard
ZELE
柿本改 KAKIMOTO RACING
MINES MOTOR SPORTS
HKS
Garrett
OS GIKEN
TOMEI The Engine Specialist

- CONTAINERS FROM JAPAN ARRIVING MONTHLY
- THE BIGGEST RANGE OF HIGH PERFORMANCE INTERCOOLER KITS & EXHAUST SYSTEMS IN AUSTRALIA
- AUSTRALIA'S LARGEST RANGE OF GENUINE NISMO PARTS
- JUST JAP CAN SOURCE ANY JAPANESE PART, FROM COMPLETE CRATE ENGINES TO BODY KITS
- THE LARGEST RANGE OF NISSAN AND TOYOTA OEM PARTS IN AUSTRALIA
- HUGE RANGE OF HALF CUTS & ENGINE PACKAGES
- USED PARTS ALWAYS IN STOCK
- STREET, TRACK, DRIFT OR DRAG – WE'VE GOT YOU COVERED

Injector Dynamics ID Direct Fit Injectors
E85 Ready!
R35 VR38/RB26/EVO 4G63 & More!

Karbonetic Carbon Fibre - Mammoth Range!
Lightweight Bonnets/Boot Lids/Doors & More
R35/Skyline/Silvia/EVO/WRX/Swift

Autech I-Beam & H-Beam Forged 4340 Conrods
Nissan/Mitsubishi/Subaru/Toyota
From $499.00 Per Set (4 Cyl)

Blitz Exhaust Systems
Huge Range Available From $929.00

Blitz CS & SE Type Intercooler Kits
Skyline/Silvia/Stagea/EVO/Chaser
From $699.00

Recaro Style Leather Office Chairs
In Stock from $249.00!

Blitz SBC Electronic Boost Controllers
From only $399.00

BLITZ
GLOBAL NETWORK
AUTHORIZED DISTRIBUTOR
AUSTRALIA

HPI130_05

HUGE RANGE OF USED PARTS ALWAYS IN STOCK

www.JustJap.com

101 Bath Road, Kirrawee Sydney, NSW Australia 2232

Ph: (02) 9545-0532 | Fax: (02) 9542-1684

Trading Hours: Monday – Friday 8:00am – 5:30pm, Saturday 8:30am – 1:00pm, Sunday – Closed